

FEMA Region II Hurricane Annex for Puerto Rico & US Virgin Islands

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Table of Contents

Preface	5
Purpose.....	6
Situation.....	7
Scope	7
Planning Assumptions and Critical Considerations	8
Concept of Operations	9
Concept of Support.....	15
Key Federal Decisions.....	16
Information Requirements	17
Coordinating Instructions	17
Oversight, Annex Development, and Maintenance.....	18
Authorities and References	18
Cultural Awareness.....	18
Appendix 1: Planning	20
Tab 1 to Appendix 1: Risk Management	24
Tab 2 to Appendix 1: Situational Assessment	36
Appendix 2: Operational Coordination	55
Tab 1 to Appendix 2: Public Information and Warning.....	63

Tab 2 to Appendix 2: Public Health and Medical Services..... 77

Tab 3 to Appendix 2: Environmental Response / Health and Safety... 83

Tab 4 to Appendix 2: Fatality Management 89

Tab 5 to Appendix 2: Infrastructure Systems..... 93

Tab 6 to Appendix 2: Mass Care / Emergency Services..... 100

Tab 7 to Appendix 2: Mass Search and Rescue Operations..... 108

Tab 8 to Appendix 2: On-Scene Security and Protection..... 112

Appendix 3: Operational Support..... 116

Tab 1 to Appendix 3: Critical Transportation 121

Tab 2 to Appendix 3: Mass Evacuation..... 127

Appendix 4: Operational Communications 129

Appendix 5: Executive Checklist..... 132

Appendix 6: List of Acronyms 138

Figure List

Figure 1: Operational Phases

Figure A1-1: Map of Surge Zones – Puerto Rico
 Figure A1-2: Map of Surge Zones – US Virgin Islands
 Figure A1-3: Map of Flood Zones – Puerto Rico
 Figure A1-4: Historical Hurricane Tracks Affecting Puerto Rico/US Virgin Islands Area
 Figure A1-5: Flood Inundation Maps from Puerto Rico for Zone AE
 Figure A1-6: Graphical Tropical Weather Outlook: 48 Hour and Five Day
 Figure A1-7: Tropical Storm Force Wind Speed Probabilities
 Figure A1-8: Five-Day Track Forecast Cone
 Figure A1-9: Combined Hazard Threat Graphic Sample from NWS, San Juan Office
 Figure A1-10: Weather Prediction Center Rainfall Forecast for Bertha
 Figure A1-11a: River Gage Location Map
 Figure A1-11b: River Gage Observed Water Level Data Sample
 Figure A1-12: USACE Disaster Impact Model: Debris Model Sample Output
 Figure A1-13: National Hurricane Program Roles and Responsibilities
 Figure A1-14: Hurricane Liaison Team Communication Flowchart

Table List

Table A1-1: Classification of Tropical Cyclones
 Table A1-2: Saffir-Simpson Hurricane Wind Scale
 Table A1-3: Core Capabilities and Projected Impacts from Hurricanes
 Table A1-4: Number of Recorded Storms affecting Puerto Rico and US Virgin Islands
 Table A1-5: Mean Hurricane Return Periods – Caribbean Area.
 Table A1-6: Puerto Rico Housing and Population in Flood Zones
 Table A1-7: Availability of Federal Tropical Cyclone Products through Time
 Table A1-8: National Hurricane Program Components

Table A5-1: Timelines of Expected Actions by Puerto Rico and US Virgin Islands
 Table A5-2: FEMA Region II Caribbean Hurricane Executive Checklist

Preface

Disasters know no borders between nations, states, or tribal lands and communities, risks and vulnerabilities affect all of us. Working together, communicating with the whole community, we can leverage our resources to protect, prevent and minimize the impact of disasters and help each other recover.

FEMA Region II is responsible for coordinating the Federal Response during emergencies and major or catastrophic events within Puerto Rico and the US Virgin Islands territories. These jurisdictions of the Caribbean Area demanding close attention not only because of their tourism value, bustling pharmaceuticals industry, rum production, and healthcare technological advances; it is home to 3,832,194 of U.S. citizens that may ultimately rely on off-island support in times of disaster.

The Caribbean Area is familiar with the threat of tropical cyclones. We only need go back a decade or two to recall some severely destructive storms to affect the islands.

Hurricane Hugo (1989) – wiped out most of St. Croix (USVI) destroying the entire infrastructure on the island. Twenty-three (23) foot waves came crashing ashore. Ultimately, to establish on-scene protection on St. Croix, the USVI government was forced to deploy over 1,000 US Military Police. Puerto Rico was next where thirteen (13) foot waves came ashore. Devastation continued inland with a huge loss of agricultural (coffee and banana) crops. Sadly, fourteen lives were lost, totaling from both Puerto Rico and the US Virgin Islands.

Hurricane Marilyn (1995) – caused such significant amounts of debris in the Port of St. Thomas; it took well over ten days to re-open the port safely. There were over 10,000 people left homeless and ten deaths. Massive landslides occurred across Puerto Rico.

Hurricane Hortense (1996) – struck Puerto Rico leaving over 1.1 million people without water and over 1.3 million people without power. The power failure ultimately led to dam gates malfunctioning, aiding to the widespread flooding. Floods caused the most deaths from the event, 19 in total. Crops and roads were damaged in excess of \$150M.

Hurricane Georges (1998) – moved from east to west over the island of Puerto Rico and inflicted the worst damage the island has seen. An unprecedented major disaster declaration for all 78 municipalities was issued by the President. 3.6 million Residents were left without electricity for several months, over 40 bridges damaged lacking access to the communities, and over 2.5M cubic yards of debris was collected. Electricity was unavailable as transmission lines that crossed mountainous terrain were destroyed and repaired via helicopters. The Federal Government deployed 4,800 employees to support Puerto Rico.

In total, since Hurricane Hugo, damages in the Caribbean have exceeded \$6 billion.

FEMA's programmatic efforts have been tremendous. Federal Mission Assignments to other Federal agencies during response operations have included deploying the US Marshals, supplying

and delivering photovoltaic generators, providing helicopters to reconstruct the electrical transmission grid, transporting electrical crews, and providing vegetative debris chippers and grinders. Payouts from the National Flood Insurance Program have exceeded \$80M dollars over the past 20 years. Federal preparedness grants for Puerto Rico alone have exceeded \$205M. The amount of certified debris management plans is on the rise, bringing more jurisdictions into eligibility status for Public Assistance reimbursement. Mitigation projects and advances in technology have postured the islands to be much more resilient. A majority of critical facilities (including water distribution plants) have back-up power and over 95% of gas stations have generators. Wind retrofitting has been occurring across the islands to better handle hurricane force winds. Dams are being built and maintained across Puerto Rico as flood control and water collection efforts. The number of available shelters (for future events) is increasing. The Distribution Center – Caribbean is a tremendous support to the area keeping generators, tarps, water, meals, and other necessary resources nearest to the people who need it.

Although a tremendous amount of work has been accomplished, we must still prepare for the inevitable “big one” that will test local, commonwealth, territorial, and Federal capabilities.

This plan addresses those primary concerns of electricity, communications, and potable water, among others. In our response efforts we must not forget those residents in isolated communities including Vieques, Culebra, and Water Island. The strategy is in place for an air/sea bridge to establish a safe and secure transportation network to reach all those in need.

This plan is addressing Response Core Capabilities through an overall Concept of Operations which includes specifics about the Caribbean Area. There is a Cultural Awareness section that informs those unfamiliar with the Caribbean about some specifics that are necessary to know. This plan includes activities in ‘Actions by Phase’ for the operators of each emergency support function (ESF) or Regional Response Coordination Center section. The plan also provides a tropical cyclone timeline and executive checklist as a guide to help decision makers through the days and hours leading up to and shortly after the tropical cyclone makes landfall.

Purpose

The FEMA Region II Hurricane Annex for Puerto Rico and the US Virgin Islands expands the concepts within the All Hazards Plan (AHP) to better describe the missions, policies, responsibilities, and coordination processes across emergency response operations for a notice tropical cyclone incident which requires specialized or unique response(s). The purpose of this annex is to support the expedited jurisdictional response to tropical and sub-tropical systems, including catastrophic hurricanes, as well as tropical depressions, tropical storms, and hurricanes, and their secondary and cascading impacts on locations in Puerto Rico and the US Virgin Islands. This plan is to be used in conjunction with the AHP, and is not an exclusive independent document.

NOTE: See Appendix 5: Executive Checklist for a timeline of Region II executive-level considerations, decisions and actions that are aligned with those of Puerto Rico and the US Virgin Islands.

Situation

The established hurricane season of June 1 – November 30 is an annual reminder of the threat this plan addresses. Our interests in the Caribbean are often threatened early into the season before the East Coast of the United States. However, there can be times when both areas of the Region are threatened at the same time. Although the threat is the same, there are a variety of scenarios that must be realized. Hazards associated with tropical cyclones, regardless of geographic location, include storm surge, high winds and flooding from heavy rains.

National Disaster Planning Scenario 10 describes the catastrophic event used for planning purposes. This scenario is for a tropical storm that develops in the Atlantic and is upgraded to a hurricane after 5 days in the open waters. After 4 days, the hurricane has steadied at dangerous Category 4 level on the Saffir-Simpson Hurricane Scale and models indicate a track that includes a possible landfall along the coast adjacent to a major metropolitan area within 2 more days. The hurricane reaches its peak as predicted and tropical storm force winds or higher makes landfall with a direct hit on the major metropolitan area and coastal towns. The next day the hurricane moves out. The rain associated with the storm has caused rivers to overflow their banks, and several rivers systems are experiencing record flood levels.

Although hurricanes and their accompanying storm surges pose the greatest threat to life and property, tropical depressions and tropical storms can also be devastating. In addition, storm surge can account for a large number of casualties and personal property damage. Flooding resulting from storm surge or heavy rains and severe weather, such as tornadoes, can cause loss of life and extensive damage.

Scope

This Hurricane Annex describes how the Federal Government, through FEMA Region II, supports the local, territorial, and commonwealth governments in Puerto Rico and the US Virgin Islands to save lives, protect property and the environment, and meet basic human needs following an incident of severe tropical weather. Because tropical cyclones are notice incidents, this Annex provides additional details for actions and tasks to be taken during pre-incident phases 1b and 1c that are not addressed in the Region II All Hazards Plan.

As an operational plan, this annex informs efforts to address potential or actual incidents. Developed under non-emergency conditions, it is a deliberate plan. As such, it includes a concept of operations and support for mitigating, responding to, and recovering from potential threats or hazards. Additionally, it includes detailed information on personnel, resources, projected time lines, assumptions, and risk analysis. Like all deliberate planning efforts, the principle purpose of this annex is to inform and support incident operations. Transition from deliberate to adaptive planning occurs with the threat of a tropical cyclone.

This annex describes the integration and synchronization of Federal capabilities to accomplish mission-essential tasks identified by FEMA Region II, in conjunction with our commonwealth / territorial counterparts, and other Federal Agencies responding under the National Response Framework (NRF) and through the National Incident Management System (NIMS) in the event of an actual or anticipated tropical cyclone affecting the Caribbean Area. It applies the general responsibilities and principles of the NRF and NIMS to the specific hazard of severe tropical cyclones adhering closely to the Federal Interagency Operational Plan (FIOP). The plan also provides the basis for further planning at the Federal, regional, commonwealth / territorial and local levels.

This plan is flexible and scalable to address response to tropical cyclones of varying severity or landfall affecting neighboring jurisdictions. The deployment of resources under this plan may be undertaken in whole or in part, as individual decisions are made and risks are evaluated through the Regional Support Plan and Incident Action Planning process. The focus of this plan is on tropical cyclone response and initial recovery actions; setting favorable conditions to stabilize the incident and for long-term recovery for the commonwealth / territories of Region II.

Planning Assumptions and Critical Considerations

Each event will require extensive examination prior to executing pre-defined elements or atypical actions developed during the planning process. The following are key planning assumptions for this annex.

- The RRCC will be activated and operational 120 hours before onset of tropical storm force winds in the United States, its territories, and/or possessions.
- FEMA will coordinate with the commonwealths / territories to provide liaison officers and representatives to the appropriate Territory and Commonwealth Emergency Operations Centers (EOCs) 96 hours before the onset of tropical storm force winds or when requested by the respective Territory / Commonwealth Emergency Manager.
- FEMA Region II will establish an interim operating facility (IOF) within theater 72 hours before tropical storm winds. The IOF will be staffed by IMATs and when feasible, co-located with or within close proximity to the EOCs.
- The New York-based IMAT will deploy to/work with the government of the US Virgin Islands. The Caribbean Area Division IMAT will deploy to/work with the government of Puerto Rico.
- The Federal response will be scalable and tailored to the severity of the incident and responsive to the requirements of affected States.
- Response operations will conclude when the termination factors established by the Unified Command are met. At that point, Federal involvement will transition to long term recovery and future hazard mitigation operations.
- State and local governments will partner/participate in all pre-landfall, landfall, and post-landfall planning and operations actions.

- In the event five-day warning is not available, FEMA, and its partner Federal departments and agencies, and their State and local government and volunteer, non-profit and non-government, and private sector partners, will have a capability to compress the planning and operational activities for which they are responsible to react to the impending storm.

This following highlights operational considerations necessary to aid in the response of a notice tropical cyclone incident. These items are supplemental to the critical considerations outlined within the All Hazards Plan.

- **Weather Forecasting:** Track accuracy has improved tremendously over the decades of tropical cyclone forecasting. Intensity forecasts are gradually improving as well. Although the overall improvements have reduced the margin of error, a margin still exists and this must be taken into account when attempting to stage and deploy resources. Sometimes there are days of notice, other times there could be just hours.
- **Travel/Lodging Restrictions:** Travel restrictions implemented by local and commonwealth / territorial authorities or the private sector before or after tropical storm winds may affect Federal interagency operations. Airport and seaport restrictions will impede getting aid to any island. Hotel space commonly used to house responders may be necessary to house survivors. Caution must be paid to the number of personnel being brought in and how they will be supported.
- **Resource Movement/Staging:** Pre-positioning/pre-staging is limited after a certain point in time due to the uncertainty of the storm's path. Some resources being staged and shipped for a Caribbean response may be threatened if the storm makes a continental United States approach. Staging resources on either island also places them in harm's way and could render resources unavailable. Navigating the islands can be difficult in normal conditions; after a tropical cyclone they could be much worse. Therefore getting resources to the island is one challenge, the other is moving them across the island.
- **Limited Ability to Evacuate:** The islands present few options for evacuating people out of danger. Evacuations away from the coast ultimately lead into mountainous terrain. Both locations are perilous, either from surge inundation or mudslides and blocked roads. Puerto Rico and the US Virgin Islands have varying protocols regarding recommendations for evacuation orders.
- **Evacuation Routes May be Overwhelmed:** If evacuations are ordered, if the volume of traffic is too great, or if the public delays in evacuating, routes may be overwhelmed resulting in complications to people being unable to leave the affected area, especially those populations with access or functional needs.
- **Interdependencies Between Shelters and Transportation:** The transportation solution to evacuation is based on the numbers of people needing evacuation, availability of privately owned transportation, numbers of evacuees with special mobility and medical needs, the time available to conduct operations, and the distance to (and availability of) shelters (private or public).

Concept of Operations

FEMA Region II has primary oversight for Federal response, recovery, and mitigation operations, and is the coordinating authority for all Federal interagency partners in support of tropical cyclone operations in Puerto Rico and the US Virgin Islands. Each Federal department and agency will continue to maintain its roles and responsibilities in accordance with Federal laws and regulations. Federal department and agency officials will integrate and synchronize incident management activities.

The process of Alert/Activation begins with receipt of a Tropical Disturbance Message from the National Oceanic and Atmospheric Administration (NOAA) into the Region II Regional Watch Center. The message is processed and delivered to Region II staff and key partners as a Situation Awareness Alert (SAA). The Hurricane Program Manager in the Response Division will provide recommendations for Alert/Activation to Senior Leadership based on current data that is made available, and continues to actively track the area of interest and make recommendations as conditions change or NOAA is able to provide probability of impact.

Region II utilizes three levels of activation for the RRCC (Level III, II, I). Not included in the levels are two postures: Steady State and Enhanced Watch. Daily operations and situational awareness activities conducted by the Regional Watch Center as per their SOP is Steady State. When an event requires more detailed/dedicated analysis, the RRCC activation level can be raised to an Enhanced Watch. Another option is to increase the RRCC to Level III, composed of ESF 5 (FEMA personnel), to establish multiple sections of the RRCC organization structure that is specifically focused on preparing the Federal response to the storm as it develops.

The RRCC can transition into Level II activation which would add other Federal agencies (ESFs 1, 3, 4, 7, 8, and 12 and others as needed) as well as the Defense Coordinating Element (DCE) if deemed necessary for meeting the anticipated need of the State(s) when the threat increases and the need for additional support to the state is determined.

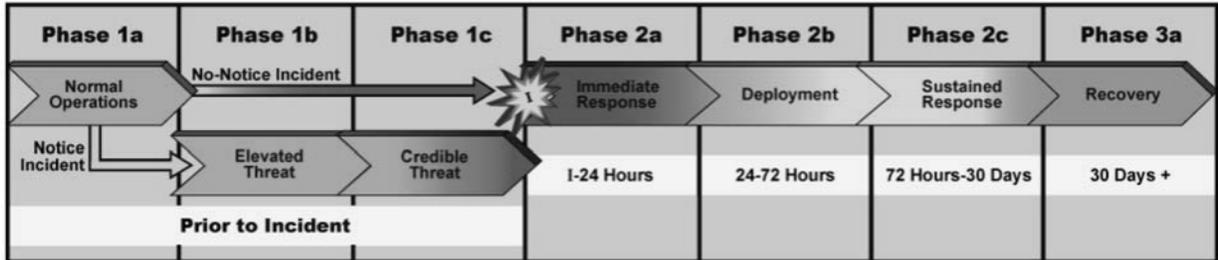
If the threat of landfall has increased significantly (or the storm's intensity and proximity to the PR/USVI AOR) then RRCC activation can be raised to Level I which is "Full Activation." Level I includes all RRCC positions, staffed fully with redundancies, and all ESFs (and other agencies) on both day and night shifts. The decision to activate the RRCC is made by the Regional Administrator (RA), or in the RA's absence, the Deputy RA or Response Division Director.

Region II staff, RRCC staff and partners, including the Defense Coordinating Officer/ Defense Coordinating Element (DCO/DCE), will be alerted to Warning or Activation orders through the Emergency Notification System (ENS) during duty and non-duty hours. In addition a Warning or Activation Order will be issued by the Response Division Director to staff Region II Emergency Support Functions (ESF) and the IMAT(s). ESFs may also be activated and deployed without a Mission Assignment, under a verbal agreement or activation order, to guarantee the ESF that a Mission Assignment will be complete shortly thereafter (usually issued from Response Division or the RRCC Mission Assignment Unit Leader (MA Manager).

Operational Phases

Tropical cyclones are notice incidents that allow responders to plan up to several days in advance of impact. This hurricane incident annex provides tasks for phases 1b and 1c.

Figure 1: Operational Phases.
 (Note that Incident (I) is the onset of tropical storm force winds)



I = Incident

Phase 1

When it is apparent that a tropical cyclone threatens the United States and that Federal support may be required, the Department of Homeland Security, under its Homeland Security Presidential Directive (HSPD)-5 authorities, moves quickly to coordinate multiple Federal activities.

Given the advances in weather forecasting and storm tracking, there is lead time to give advance warning to the public and coordinate with local, state, tribal, territorial, and insular area emergency managers. However, until the storm is 36 hours from the onset of tropical storm force winds, the exact location of landfall and the scope of tropical cyclone-related consequences are less predictable. A tropical cyclone affects multiple jurisdictions, so Federal response operations must be forward-leaning and flexible to be effective.

Prior to, and during, a catastrophic tropical cyclone incident, the Federal Government mobilizes and deploys assets in anticipation of a formal request from the state for Federal support. The intent of these proactive efforts is to ensure that Federal resources reach the impacted area in time to assist in restoring any disruption, and are performed in coordination and collaboration with whole community partners, when possible.

Phase 1 is divided up into three sub-phases: 1a, 1b and 1c. Phase 1a is continuous and ongoing, also known as normal operations or monitoring. Phase 1b starts when the National Hurricane Center’s 5-day Track Forecast Cone includes or is near the PR/USVI area. Phase 1c starts when the National Hurricane Center’s 3-day Track Forecast Cone includes or is near the PR/USVI coastal area. Phasing below includes descriptions of “H” minus or plus a certain number of hours. “H-hour” being the onset of tropical storm force winds, a commonly accepted indicator of when to stop activities (conditions are unfavorable and dangerous to operate in).

This document attempts to capture the response to a catastrophic event. If the circumstances (storm characteristics) are less severe, actions may vary from the phased-descriptions below. For example, the level of Enhanced Watch may continue through onset of tropical storm force winds because the threat does not warrant a more extensive response.

Phase 1a – Monitoring / Normal Operations (Over H-120hours)

A tropical disturbance or more intense storm system is present in the Atlantic or Caribbean basin.

Phase 1a is such a significant distance away from the PR/USVI Area of Responsibility (AOR) that this is “steady state” for the RRCC and response operations. At this time, the Region II Regional Watch Center is functioning under their standard operating procedures.

Phase 1b – Elevated Threat (H-120 to H-72)

The moment the 5-day forecast cone (when available) includes and remains within the PR/USVI AOR; or when a tropical disturbance or more intense storm system is in that range.

During this time, and up to the formal activation of the RRCC, an Enhanced Watch will routinely analyze available data and brief senior leadership on storm details and key decision points. As needed, the Enhanced Watch staff will disseminate an Operational Summary, to detail activities throughout the Enhanced Watch level of activation. If this situation warrants, a Level-III activation may be warranted.

The decision to deploy the Incident Management Assistance Teams (IMAT) to Puerto Rico and US Virgin Islands governments should be done no later than 72 hours prior to onset of tropical storm force winds/closest approach of the disturbance. This will allow safe movement and enough time to establish lodging and connectivity with our stakeholders.

Phase 1c – Credible Threat (H-72 to H-hour)

The moment the 3-day forecast cone (when available) includes and remains within the PR/USVI AOR; or when a tropical disturbance or more intense storm system is in that range.

The Region II RRCC will activate to a Level-II and begin preparing for an increased activation and potential land-falling event. This includes deployment notifications to all FEMA personnel (IMAT, RRCS, reservists) as well as other Federal agencies, private/non-governmental partners, verification of surge account funds, checking inventory of warehouses and support capabilities. Phase 1c is also when consistent and routine communications with our State and Whole Community partners begins. Monitoring and reporting of State activities also starts.

Phase 1c anticipates/schedules the release of more robust capabilities like air support, medical teams, and support bases. Pre-positioning of resources may take place to better effect post-landfall activities. IMATs will coordinate with states to identify potential federal resources required to support the state/federal pre-landfall incident objectives.

States should consider the option of requesting a pre-disaster emergency declaration. See FEMA Policy 010-4 for more information. Consider activating to a Level-I if the situation warrants.

Phase 2

The transition from Phase 1 to Phase 2 can occur as the onset of tropical storm force winds make landfall and requires a federal response to support the commonwealth/territory. After tropical storm-force winds affect an area, actions are taken to provide an immediate, coordinated, and effective Federal response to save lives, shelter the affected population, and reduce property damage in support of the affected commonwealth/territorial and local governments. During this phase, damage assessments are performed in order to prioritize resources. Close coordination with the affected jurisdictions will yield support for the restoration of infrastructure systems as well as transportation routes. Actions continue until there are sufficient resources available to stabilize the incident, and provide commonwealth/territorial or local governments the ability to reassume full response operations.

Phase 2 is divided up into three sub-phases: 2a, 2b and 2c. Moving from one sub-phase to another is based upon leadership decisions that take into consideration the current situation. It is situational specific and will generally be different for every disaster. Phase 2 ends when the Region is no longer doing lifesaving or life sustaining operations.

Phase 2a – Immediate Response (H-hour to H+24 hours)

Phase 2a can be considered the period of operations at the onset of Tropical Storm force winds (or landfall of the tropical cyclone) through the next 24 hours.

The Region 2 RRCC will activate (or remain activated) at an appropriate level relative to the event. Staged resources may begin to move closer to the affected area, in anticipation of formal state requests (post-declaration) or in accordance with the Stafford Act, section 502 (a)(8), indicating that the President, delegated to the Regional Administrator, may act without the presence of a specific requests, to provide the necessary resources to protect life and property. This is known in commonly used FEMA vernacular as “leaning forward” or a “pushing resources”.

Region II RRCC will maintain contact with the state, IMAT, and the NRCC in response to damage inflicted by the tropical disturbance.

Phase 2b – Deployment (H+24 hours to H+72 hours)

The threat from the tropical disturbance (or more intense storm system) is eliminated; tropical storm force winds have left the area.

The IMAT and RRCC will continue to work in support of PR/USVI to perform lifesaving, life sustaining measures and the other goals and objectives identified through unified coordination. Search and rescue activities, movement of commodities, and movement of assessment teams is usually the most common activity occurring in this phase. Future Planning may also begin; the focus of future plans to be determined by

unified objectives/needs identified. Ultimately a request for PDAs and possible declaration may follow.

Phase 2c – Sustained Response (H+72 hours to H+30 days)

Please refer to the Region II All Hazards Plan.

Phase 3 – Recovery (+30 days)

Phase 3, which encompasses recovery and mitigation activities, begins as early as Phase 2 but may continue for months or years depending on the damage from the tropical cyclone. The Federal government supports survivors with disaster assistance programs as necessary, ultimately through the Office of the Federal Disaster Recovery Coordinator (if appointed).

Gradually, during the response phase, efforts shift towards recovery. Linkages exist between response and recovery thus making the transition seamless and transparent. Some activities can be coordinated prior to landfall including the availability of preliminary damage assessment teams. Post-landfall, recovery efforts are more noticeable and primarily offered after a declaration is issued. Once the declaration is issued and life-saving operations have ceased, a clearer transition to recovery is visible. Efforts are to assist survivors with registration as well as governmental entities requesting public assistance. Mitigation also comes to the forefront during the recovery phase.

Hurricane-Specific Objectives

The National Preparedness Goal identifies core capabilities for response operations.

The Region II All Hazards Plan and its respective objectives for each core capability were developed for a no-notice event. Consequently, the courses of actions have been designed with no lead time to prepare for a notice event such as a hurricane. This plan has revised objectives to reflect the notice event of a hurricane (or other tropical cyclones). Table 1 below shows the objectives of this plan for each core capability. For each capability, it shows whether the objective is the same or has been revised from the All Hazards Plan.

Table 1: Hurricane Objectives by Core Capability

Core Capability	Objective	Location of More Detailed Information
Planning	Within 72 hours of the onset of tropical-force winds, a transition from deliberate to adaptive planning will occur. During Phase 1c, the Regional Response Coordination Center’s (RRCC) Planning Support Section, through ESF-5, initiates the adaptive planning process. (Revised from AHP)	Appendix 1

Core Capability	Objective	Location of More Detailed Information
Situational Assessment	The RRCC Situation Awareness Section, with the Hurricane Liaison Team, will use products/tools to enhance situational awareness of potential and assessment of actual impacts. The Situational Awareness Section will coordinate with the Planning Support Section to ensure the appropriate products/tools are employed in the adaptation of deliberate plans and the development of adaptive plans. (Revised from AHP)	Appendix 1, Tab 2
Operational Coordination	Facilitate coordination of critical resources and establish command and control structures within impacted jurisdictions to meet basic human needs, stabilize the incident and transition into recovery. (Revised from AHP)	Appendix 2
Public Information and Warning	Provide public information to the impacted populations in coordination with Puerto Rico and US Virgin Islands governments. (Revised from AHP)	Appendix 2, Tab 1
Public Health & Medical Services	Within 24 hours of safe conditions, have teams on site at State specified facilities to provide life-saving, life-sustaining services. (Revised from AHP)	Appendix 2, Tab 2
Environmental Response / Health & Safety	Deploy adequate environmental response capabilities within 48 hours to impacted jurisdictions to mitigate oil and hazardous substances spills or releases and prepare responders for contact with environmental hazards. (No change from AHP)	Appendix 2, Tab 3
Fatality Management	Make accurate assessment of fatalities in each incident and plan deployment of public and private resources to augment local medical examiners. (No change from AHP)	Appendix 2, Tab 4
Infrastructure Systems	Assess and prioritize CIKR damaged by incidents and coordinate public and private sector resources that will reduce the further loss of life. (No change from AHP)	Appendix 2, Tab 5
Mass Care Services	Deploy mass care services for up to 25 percent of the impacted population. (No change from AHP)	Appendix 2, Tab 6
Mass Search & Rescue Operations	Prior to landfall, stage anticipated required resources and teams at the Incident Support Base or facility as requested by PR/USVI. (Revised from AHP)	Appendix 2, Tab 7
On-Scene Security and Protection	Prior to landfall, stage anticipated required resources and teams at the Incident Support Base or facility as requested by PR/USVI.	Appendix 2, Tab 8
Operations Support / (Public and Private Services and Resources)	Re-establish the public and private sector supply chain(s) that restores the population's access to prioritized goods and services. (No change from AHP)	Appendix 3
Critical Transportation	Determine the most appropriate transportation services that facilitate the response and support survivor needs within two operational periods. (No change from AHP)	Appendix 3, Tab 1
Operational Communications	Prior to landfall, complete hardening of telecommunications resources against deformation and power outages. (Revised from AHP)	Appendix 4

Concept of Support

FEMA Region II support for the Caribbean is the exception to the FEMA concept of support that relies on ground transportation for the Federal push of resources into a disaster area. All assets destined for deployment pre-landfall require air transportation. Assets being deployed post-landfall may utilize air transportation as well as maritime transportation. This limits the output and size of the Federal footprint in the Caribbean. Assets must be prioritized for life saving then life sustaining. Determining which lifesaving assets will be deployed first is a significant challenge. This reality dictates the need for a time-phased resource deployment as well as strategically choosing locations for staging (airports, seaports).

When considering the initial push of resources, please consider consolidating resources by type and location (i.e. lifesaving teams will come from Miami, FL; commodities will come from Atlanta, GA.). Airspace and airflow will be restricted in the days after landfall. It is not prudent to send resources from multiple airports and seaports into a location that has one if not two operating facilities. Consolidation and coordination will facilitate a controlled flow of resources to the space and capability-limited Caribbean islands.

There are only two facilities, both in Puerto Rico, that have the capability to serve as Incident Support Bases (ISB). The most efficient ISB location is Jose Aponte Airport (Roosevelt Roads) in Ceiba, PR. The second location is Rafael Hernandez Airport (Ramey) in Aguadilla, PR. Post-landfall assessments will indicate which facilities are operational. The primary assumption is that at least one of these facilities will survive. Providing resources directly to the US Virgin Islands is preferable but unlikely because of limited capacity at the airports on St. Thomas and St. Croix; there is no airport on St. John. So then, resources destined for the US Virgin Islands will pass through the ISB on Puerto Rico and then transported to each island, as necessary.

Once an ISB is established, a hub and spoke logistics system will be implemented using a combination of local trucking, maritime, and rotary and fixed-wing assets to delivery resources and personnel to impacted areas.

- In Puerto Rico, the hub and spoke system is from the Federal ISB to Puerto Rico National Guard Armories then to *municipio* facilities. This is to include deliveries to the populated islands of Culebra and Vieques off Puerto Rico's eastern coast.
- In the US Virgin Islands, more assistance may be required to deliver resources directly to the population through their pre-identified shelters and points of distribution locations.

Thus it is prudent to re-establish logistics nodes (port opening and airfield assessment teams) as the first priority to enable Federal response.

Key Federal Decisions

Key state and federal decisions required during response to a tropical cyclone event include but are not limited to:

- Deployment of large teams, equipment caches, and national contracts.
- Requesting/Assisting with a pre-disaster emergency declaration.
- The location of Incident Support Base (ISB), Regional Staging Area(s) (RSA), Responder Support Camp(s) (RSC), Points of Distribution (POD) or other interim operating facilities.

- Evacuations pre- or post-event
- If a JFO is to be established, decisions on location, staffing, program priorities, and demobilization will be required.

Information Requirements

Essential Elements of Information (EEIs) form a comprehensive list of information requirements, derived from deliberate plans that are also needed to promote informed decision making.

Senior-level decision-makers responsible for implementing this plan should consider the following hurricane-specific EEIs:

- The tropical cyclone's designated category, geographic location, projected storm track (including forward speed and direction), intensity, barometric pressures, storm surge height, projected destruction, anticipated landfall time and place, potential for tornado activity.
- Forecasted weather and seas in the area, including anticipated storm surge, river flooding and rainfall, potential for tornado activity, well as risks to vulnerable water structures (i.e., levees, dams).
- Impacted population demographics (including: total numbers affected, functional needs populations/locations).
- Local, territorial, and commonwealth evacuation plans, time lines, and instructions (including estimates on evacuation numbers, the evacuation of critical facilities such as hospitals and nursing homes).
- Identification of local, territorial, commonwealth, and national-level priorities.
- Critical Infrastructure/Key Resources in the potentially affected area.
- Estimated number of shelters and population
- Status of re-entry plans and information affecting the safe return of residents, such as the number of homes destroyed or damaged by wind or flooding.
- Pre-positioned FEMA assets/actions (ISB, commodities, IMATs, LNOs, etc.)

Critical Information Requirements (CIRs) are specific types of high-priority EEIs. What typically separates a CIR from an EEI is its urgency. For example, the death or serious injury to a Federal responder or actual, major damage to CI/KR facilities should be reported immediately.

Coordinating Instructions

When the territory or commonwealth requests Federal support in preparation for or response to an impending tropical cyclone, the Regional Administrator will coordinate Federal operations for domestic incident management as directed in HSPD-5. The coordinating instructions for this

Hurricane Incident Annex will follow those instructions outlined within the Region II All Hazards Plan.

Oversight, Annex Development, and Maintenance

The authorities that guide the structure, development, and implementation of the Region II All Hazards Plan, and this Hurricane Incident Annex, are statutes, executive orders, regulations, and presidential directives. Congress has provided the broad statutory authority necessary for this plan, and the President has issued executive orders and presidential directives to supply policy direction to departments and agencies of the Executive Branch.

FEMA Region II, in close coordination with FEMA HQ, the Office of the Secretary of Homeland Security, is the executive agent for the Region II All Hazards Plan and this Hurricane Incident Annex, and is responsible for management and maintenance. The Hurricane Incident Annex will be updated periodically, as required, to incorporate new presidential directives, legislative changes, and procedural changes based on lessons learned from exercises and actual incidents.

Authorities and References

Refer to the Region II All Hazards Plan (AHP).

Cultural Awareness

Please be aware there are some cultural and geographic nuances that should be understood when operating within Puerto Rico and the US Virgin Islands. Some of them are listed below.

Puerto Rico

Spanish is the primary language of Puerto Rico

The population of Puerto Rico ranks 27th of the 50 United States and its territories (approx. 3.7M population).

Similar to the government structure of counties in mainland United States, there are 78 municipalities, in Spanish ‘municipio’.

The government of Puerto Rico has grouped their municipios into 12 PREMA Zones (see map in Operational Coordination Section)

2 municipio islands are separated from the mainland of Puerto Rico: Culebra and Vieques (in PREMA Zone XII Ceiba).

Across the island there are 184 rivers and 35 dams.

US Virgin Islands

English is the primary language, however influenced by Creole and Dutch terms.

The population of the US Virgin Islands is approximately 110,000.

Vehicular traffic is European-style where you drive on left using American vehicles that were designed to drive on the right.

The archipelago includes 3 primary islands (St. Thomas, St. Croix, and St. John) and Water Island, under the jurisdiction of St. Thomas.

The topography of the US Virgin Islands severely limits the even/flat terrain necessary for large Federal operations (staging areas, base camps, etc).

There is no natural source of fresh water for St. Thomas and St. John. Water is desalinated or collected in private cisterns.

Existing inter-island transportation consists of:

- Passenger and cargo ferry service between St. Thomas and St. John;
- Seaplane service (passenger only) between St. Thomas and St. Croix.
- No formal transportation exists between St. John and St. Croix.
- Limited ferry service between St. Thomas and Water Island.

Appendix 1: Planning

Unlike the All Hazards Plan, which is based primarily upon a no-notice catastrophic incident, the Hurricane Incident Annex is based upon a notice tropical cyclone incident. Per the Regional Incident Support Manual, this section will include the development of regional-level plans that support State operations at the incident level. The staff provides a range of planning services to address present or known requirements and to anticipate and devise means to deal with future needs. The incident planning that occurs at the regional (RRCC) level is inherently differently from the planning that goes on at the incident level (IMAT). Ultimately, planning helps to ensure that the efforts of response, recovery, and mitigation are well coordinated and that these efforts support jointly developed objectives and the priorities of leadership at all levels.

Hurricane Planning Objective: Within 72 hours of the onset of tropical-force winds, a transition from deliberate to adaptive planning will occur. During Phase 1c, the Regional Response Coordination Center’s (RRCC) Planning Support Section, through ESF-5, initiates the adaptive planning process. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Planning

Planning is a continuous process but this section will focus on the planning related to the threat of a tropical cyclone. FEMA Region II’s Response Division has an Operations Planning Branch that writes and maintains the All Hazards Plan and its hazard-specific annexes. Their efforts are year-round. Occasionally a threat occurs where the Regional staff, with collateral duty in the realm of planning, is called into service. The plans created should be used by the Planning Support Section and by the Chief and Advisory Staff to establish operational procedures and initial actions.

The RRCC activation is the first of many transitions in the planning cycle. This transition is highlighted by collateral duty staff manipulating the static All Hazards Plan and Hurricane Annex into the Regional Support Plan (RSP). The Regional Support Plan is a tailoring of the existing plans into a document that is more “field” useable as well as crafted to the specifics of the current event. It is done through knowledge of the existing plan, data from the current situation, and direction from the Chief and Advisory staff.

Incident Management Assistance Teams (IMATs) will eventually arrive to link up with Puerto Rico and US Virgin Islands governments. This linkage is another transition in planning because the IMAT will begin to produce an Incident Action Plan (IAP), which would then dictate how the Region (the RRCC) postures itself to support PR/USVI and the IMATs. The issuance of the first IAP thus changes the implementation of the RSP (and potentially its contents). Continued adjustments could be made, if necessary. The IAP becomes more prominent for response purposes, thus allowing a shift in the Planning Support Section’s efforts. Further, the PSS reviews, edits, and distributes execution checklists, synchronization matrices, and other deliberate planning aids to the RRCCs and, as appropriate, the IMAT.

The final transition is the as the event transitions into Federal Coordinating Officer control in a Joint Field Office. A literal transition to a new space includes the necessary data, materials, schedules, etc. to the new location and other staff. It is possible in larger events that RRCC staff may work in the field as well. As with any transition, the more information shared and introductions made the smoother and more consistent the products and services will be.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Plans have been exercised and tested across local, territorial, commonwealth, and Federal entities. Private sector and nongovernmental organizations (NGO) have participated in exercises, as appropriate.

All ESFs

- Conduct continuity planning.
- Ensure linkages with the Regional Interagency Steering Committee (RISC), liaison officers, operations centers, and other departments and agencies.
- Conduct training and exercises in preparation for a tropical cyclone and applying lessons learned and best practices to operating procedures.

Phase 1b – Elevated Threat

End State: Plans are executed based on the current situation. Additionally products are developed in support of the current incident as appropriate.

All ESFs

- Conduct operational planning.

ESF-5

- *Situational Awareness Section (SAS)*: Coordinate tropical cyclone data gathering operations including storm tracking and predictions.
- *Chief and Advisory Staff Section (CSS)/Planning Support Section (PSS)*: Identify deficiencies or limiting factors in planned capability.
- *All sections*: Monitor information on the storm and begin to prepare for potential landfall.
- *SAS*: Notification from the Hurricane Liaison Team of a tropical cyclone threat to help advise FEMA senior leadership on the appropriate hazards.
- *RSS*: Determine the need to activate Federal resources in advance of formal requests for assistance.
- *PSS*: Conduct regional-level operational planning in coordination with the respective State(s).

Phase 1c – Credible Threat

End State: Plans continue to be updated and revised. Additional stakeholders have been incorporated into planning efforts, as appropriate.

ESF-5

- *PSS*: Identify the Core Capability appendices applicable and alter to match the specific incident, and develop metrics to determine whether the incident requires a scaled down response approach or requires the catastrophic incident objective and supporting tasks identified in each Core Capability.
- *PSS*: Develop the initial Regional Support Plan (RSP) and disseminate for execution. The RSP will be distributed to HQs for visibility on Regional priorities and activities, and to FEMA and response partner personnel who will be deployed. While not inherently shared with state partners, if requested, RSPs and other Planning products can be shared with state partners.
- *PSS*: Work with the Situational Awareness Section to identify incident issues that will require an Advanced Operations Plan (AOP) (ex: short-term sheltering plan), and develop in conjunction with RRCS and ESF partners.
- *PSS*: Continue issuing the Regional Support Plan based upon increasing situational awareness and further validation of the Regional All Hazards Plan Hurricane Annex.
- As FEMA elements are deployed and arrive at either state EOCs or IOFs, coordinate with deployed personnel to validate and align Regional response priorities with state priorities.
- The IMAT will develop a joint IAP with the state for preparedness actions prior to landfall.

Phase 2a – Immediate Response

End State: Existing plans have been reviewed to identify preliminary information requirements and initial actions as defined by predetermined execution checklists.

ESF-5

- Refine joint Federal/State incident objectives (goal is within 12 hours of dissipation of tropical storm force winds).
- *IMAT*: Update the IAP as necessary for changing situation.
- *PSS*: Develop any additional Planning products required by the specific incident (functional plans, demobilization plans, etc.).
- *PSS*: Continue to modify response operations plan as the tropical cyclone impacts are defined.

Phase 2b – Deployment

End State: Existing plans have been modified for the incident using a coordinated adaptive planning process. Critical objectives and accompanying tasks have been identified for the Federal response effort.

ESF-5

- *PSS*: coordinate with the deployed IMAT(s) to ensure State priorities are reflected in the IAP and RSP.
- *PSS*: prepare for transition to IMAT/Joint Field Office staff, including the termination of the RSP iterations.

Phase 2c – Sustained Response

End State: Coordination has taken place between response and recovery plans/planners.

ESF-5

- *PPS*: As the Joint Field Office and Planning Section become functional, are able to conduct joint planning with state partners, and are able to consistently issue jointly developed Incident Action Plans, the Planning Support Section will relinquish Planning responsibilities to the Joint Field Office.

Phase 3a – Short-Term Recovery

End State: Plans have been developed for transition to long-term recovery and the demobilization of Federal response personnel, programs, and resources.

ESF-5

- *PSS*: Develop an incident-specific strategic plan that includes milestones to transition from response to recovery to close out operations (goal is within 14 days of the FCO assuming operational control).

Tab 1 to Appendix 1: Risk Management

Risk management is the process for identifying, analyzing, and communicating risk and accepting, avoiding, transferring, or controlling it to an acceptable level considering associated costs and benefits of any actions taken. As a formal process for making informed decisions, planning promotes a common understanding of, and approach to, risk management.

Hazard Background

Hurricanes are tropical cyclones that develop in the northern hemisphere tropics, east of the International dateline. Tropical cyclones may be defined as a closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere. Tropical cyclones are classified as shown in Table A1-1.

Table A1-1. Classification of Tropical Cyclones

Classification	Maximum Sustained Wind
Tropical Depression	33 knots (38 mph or 62 km/hr) or less.
Tropical Storm	34 knots (39 mph or 63 km/hr) to 63 (73 mph or 118 km/hr).
Hurricane	An intense tropical weather system with a well-defined circulation and maximum sustained surface winds of 64 knots (74 mph) or higher.

Early season tropical cyclones are almost exclusively confined to the western Caribbean and the Gulf of Mexico. By the end of June or early July, the area of formation gradually shifts eastward. By late July, the frequency begins to slowly increase, and the area of formation shifts still farther eastward. By late August, tropical cyclones form over a broad area that extends as far east as the Cape Verde islands near the coast of Africa. The period from about August 20 through September 15 produces the maximum number of Cape Verde type storms, many of which travel across most of the width of the Atlantic Ocean. After mid-September, the frequency begins to decline and the formative area retreats westward. By early October, the area of maximum occurrence returns to the western Caribbean. While there is notice ahead of a tropical cyclone, its path and impacts are less predictable.

The average hurricane spans 500 miles in diameter, with an average forward speed of 15 miles per hour. As tropical cyclones, hurricanes produce major hazards that cause threats to the human environments: the storm surge or storm tide, high winds, tornadoes, and rainfall-induced flooding. Each hazard is briefly described below.

Storm Surge / Storm Tide

Although storm surge is often the greatest threat to life and property from a tropical cyclone, many people do not understand this term and the threat it represents. Storm surge poses a significant threat for drowning. A mere six inches of fast-moving flood water can knock over an adult. It takes only two feet of rushing water to carry away most vehicles—including pickups and

SUVs. Storm surge can cause water levels to rise quickly and flood large areas—sometimes in just minutes.

Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides. The greatest surge is typically experienced in the northeast quadrant of the storm. Storm tide is defined as the water level rise due to the combination of storm surge and the astronomical tide. The height of storm surge / tide depends upon several factors. Some of those factors include the storm size (defined as the radius of maximum winds around the storm’s eye), angle of approach to the coastline, width and slope of the continental shelf, and local features such as concave coastlines, bays, rivers, headlands or islands, As a general rule, the stronger (measured by central pressure and wind speed) and wider (size) and faster the hurricane is, the higher the surge or tide will be. Along the immediate coast, storm surge is the greatest threat to life and property.

High Winds

A tropical cyclone can produce winds exceeding 157 miles per hour. Hurricane winds can damage buildings, destroy mobile homes, and other property. Debris, such as signs, roofing material, siding, and other items become airborne debris, causing additional injuries of damages in a hurricane. In addition, high-rise buildings merit special consideration; wind pressures on upper portions of tall structures can be much greater than those at ground level. The areas high-rise bridges become particularly vulnerable to high winds. Not only could they experience wind-related structural problems, but it could also impact evacuation times. The winds are the greatest cause of property damage inland of the coast.

The Saffir-Simpson Hurricane Wind Scale estimates potential property damage based upon a hurricane’s sustained wind speed. Hurricanes are classified by categories on the Saffir-Simpson Hurricane Wind Scale as shown in Table A1-2.

Table A1-2. Saffir-Simpson Hurricane Wind Scale

Strength	Wind Speed (Kts)	Wind Speed (MPH)	Types of Damage	Historical Reference
1	64-82 kt	74-95 mph	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.	Irene (2011) Hortense (1996) Betsy(1956)
2	83-95 kt	96-110 mph	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.	Omar (2008) Georges(1998) Marilyn (1995)
3 (Major)	96-112 kt	111-129 mph	Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.	Hugo(1989) over PR
4 (Major)	113-136 kt	130-156 mph	Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.	Earl (2010) Lenny(1999) Hugo(1989) over USVI
5 (Major)	137 kt or higher	157 mph or higher	Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.	San Felipe(1928)

Tornadoes

Hurricane induced tornadoes can also affect many inland counties as far as 100 miles from the coast. In these tornadoes most often occur in the rain bands well away from the storm’s center.

Rainfall-induced Flooding

Widespread torrential rains can produce deadly and destructive floods. Yet, the amounts and arrival times of rainfall associated with hurricanes remain highly unpredictable. For most hurricanes, the heaviest rainfall begins near the time of arrival of sustained tropical storm winds; however, heavy rains in amounts exceeding 20 inches can precede an approaching hurricane by as much as 24 hours. Unrelated weather systems can also contribute significant rainfall amounts within a basin in advance of a hurricane.

Operational

During a hurricane, core capabilities face impacts based on the hurricane’s intensity. To be able to support the stabilization and restoration of basic services and community functionality, responders should be aware of the possible impacts as shown in Table A1-3.

Table A1-3. Core Capabilities and Projected Impacts from Hurricanes

Core Capability	Projected Impact
Planning	Hurricane response planning is adjusted based on the impact, and to meet the needs and actions required to save lives, protect property, and the environment. Regional Support Plans and Incident Action Plans will be created and revised as necessary to achieve the objectives of each operational period.
Operational Coordination	The ability to establish unity of effort will be delayed by damaged or degraded infrastructure as will the time required to establish lines of communications and pathways for logistical support. Multiple reporting methodologies and statutory authorities across the incident echelons, and multiple jurisdictions require coordination to maintain a unity of effort and common operating picture (COP) for efficient and effective response in support of states. The Federal Government response to a hurricane requires the establishment of command, control, and coordination across local incident commands and allocation of resources with local, territorial, and commonwealth governments; the private sector; and nontraditional stakeholders.
Operational Communications	Communications entities establish and maintain functional and interoperable communications systems for local, territorial, commonwealth, and Federal response teams. After the hurricane, 100% of communications infrastructure capabilities within the impact zone may be damaged, requiring alternative means of communication to reach the general public and meet public safety and first responder needs. This includes providing temporary support to local, territorial, commonwealth, and Federal governments when communications systems have been affected or disabled.
Critical Transportation	All types of transportation systems are vulnerable to damage from a hurricane. Flooding from a hurricane’s storm surge can flood roadways and tunnels, wash out roads, damage bridges, and affect railroad tracks. Trees and other debris can also block roads, while traffic signals and street signs may be blown away. Seaports, waterways, and airports may be inoperable due to high winds or debris. Loss of power to any of the transportation systems can create additional problems. Federal resources are intended to support territorial and commonwealth governments with the transportation or evacuation of an affected population, and provide additional accommodations to the functional needs population and household pets. Following the hurricane, there will be a lack of detailed transportation assessments by territory, commonwealth, and local officials because of inadequate resources and degradation of the transportation infrastructure.
Environmental Response / Health and Safety	High winds and flooding from a hurricane can cause various environmental hazards for responders and the public. Sewage treatment systems can be flooded and release waste into fresh water systems. Chemical production facilities and storage systems can be breached and release hazardous materials. Commercial and household chemicals can be washed out of buildings and contaminate debris. Electrical and gas service into buildings can be damaged, producing dangerous conditions when service is restored. Hot and humid conditions in vacant, flooded buildings can lead to immediate mold growth. Local, territorial and commonwealth government Environmental Response/Health and Safety (ERHS) resources will be overwhelmed during the hurricane response and require Federal support.

Core Capability	Projected Impact
	The Federal Government can provide coordination, guidance, technical assistance, and protection of the public by identifying and mitigating hazards in the affected area. Response operations can be complicated because the mechanisms by which Federal agencies agree upon and communicate ERHS issues have been established, but delivery of one unified message to first responders and the public has not yet been implemented. Although the majority of ERHS, firefighting, and oil and hazardous materials response resources are local, state, and private sector assets, the Federal Government may be required to provide coordination of resources and support during a multi-island incident.
Fatality Management	Local, territorial and commonwealth fatality management operations directed by the lead medical examiner (or other authority) may be overwhelmed and require Federal fatality management assistance. The Federal interagency activates and deploys on-call teams (e.g., Disaster Mortuary Assistance Team) and specialized Federal resources (e.g., Disaster Portable Morgue Units) at the request of the jurisdictions and resources to assist in collection of anti-mortem data from the deceased, temporary human remains storage, mortuary services, and forensic identification.
Mass Care Services	Throughout all phases of a hurricane response, displaced individuals will require life-sustaining resources and services (e.g., shelters, food, water, non-acute medical services, functional needs, and pet sheltering) that cannot be provided on their own and overwhelm the capability of the local and state jurisdiction. National-level coordination of mass care includes emergency assistance, housing, and human services and identifies all additional national-level commodities and shelters that will be used to support local and state governments. Federal assistance is provided for contract support, subject matter expertise, staff augmentation, human material, and technical support when requested by the local, state,
Mass Search and Rescue Operations	After the hurricane passes, the first priority will be rescuing citizens who are trapped in buildings or by flood water. The sheer volume of citizens to be rescued and buildings to be searched will cause local Search and Rescue (SAR) personnel and resources to be overwhelmed. Local SAR facilities and resources may be impacted by the storm, rendering them inoperable or not fully capable of performing all SAR activities. SAR resources at the national level coordinate and provide life-saving and life-sustaining teams, resources, and operational coordination in the area affected by a hurricane when affected SAR personnel and resources become overwhelmed.
On-Scene Security and Protection	Evacuations, loss of power, sheltering, and damage to transportation systems all create law enforcement requirements during a hurricane. Law enforcement will be required to block roads, direct traffic, and patrol the evacuated area to notify citizens to leave. After the area has been evacuated, increased law enforcement patrols are needed to deter criminal activity in vacant buildings. Loss of power and damage from the hurricane will disable alarm systems and other security features of residential, commercial buildings, and critical infrastructure sites. Federal law enforcement resources may be required to augment territorial and commonwealth law enforcement and security personnel to provide relief to sustain operations during response and short-term recovery. Federal law enforcement protects the public and secures the affected area, potentially requiring coordination of resources across multiple locations.
Public Health and Medical Services	Prior to a hurricane, local, territorial, and commonwealth medical systems coordinate with the Department of Health and Human Services through the National Disaster Medical System to evacuate patients from medical facilities that are predicted to be impacted by the hurricane. After the hurricane passes, affected healthcare facilities that did not anticipate damage or loss of power may require additional emergency evacuations. After the storm passes and the members of the general population return to their homes, the highest number of injuries and illnesses occur from moving debris, exposure to untreated water, and completing home repairs. These injured and ill citizens may require temporary emergency medical care facilities if normal emergency facilities are damaged or closed. Federal support may be required during a hurricane response when territorial and commonwealth jurisdictions' resources are overwhelmed and they request Federal public health and medical support in preparation and response to a hurricane. Federal public health and medical support may include emergency medical care, patient evacuations (and return), drug distribution, health surveillance, and assessment of the health care system. Federal support is provided through national-level public health and medical support resources and nontraditional sources.
Public Information and Warning	In the immediate aftermath of a hurricane, the ability to deliver actionable messages to impacted communities will be subject to the degradation of communications infrastructure necessary to deliver public messaging. Damage to communication systems and loss of power may require emergency messaging through nontraditional sources (e.g., Facebook, Twitter, YouTube), but these messages must be de-conflicted if they are sent by multiple sources. Conflicting messaging will strain the ability for responders to establish two-way communications with the affected public. Guidance to the public sector concerning food, water, shelters, and so on will not be able to be validated until two-way lines of communication are established.
Public and Private Services and Resources	In the aftermath of a hurricane, private sector resources beyond those provided by existing government contracts may need to be identified. The affected population will require items including bottled water, meals, personal sanitary supplies, clothing, tarps, fuel, and generators. The Federal Government will be requested to coordinate the ordering, allocation, and distribution of resources and services resources from public- and private-sector sources in coordination with other local, state, tribal, territorial, and insular area governments. If requirements exceed the available resources, the Federal interagency may be required to identify and supply nontraditional forms of life-saving and life-sustaining resources (e.g.,

Core Capability	Projected Impact
	bulk water distribution). Federal requests for private-sector resources also require de-confliction with local, territorial, and commonwealth government contracts so that resources are not double-counted or incorrectly adjudicated.
Situational Assessment	<p>Accurate and timely information from situational assessments must be available to allow for an effective response. A hurricane affects a large geographic area and all core capabilities, resulting in a wide spectrum of data that requires distillation and analysis to become decision-relevant information. The Federal Government, in partnership with the private sector, faith-based organizations, and nongovernmental organizations adheres to reporting requirements for agency-relevant information delivered to the NRCC, Regional Response Coordination Center (RRCC), National Operations Center (NOC) and other coordination and operation centers. The National Response Coordination Staff initiate and coordinate essential elements of information and critical information requests through established channels of reporting.</p> <p>Effective management and analysis of situational assessment information allows all response partners to disseminate reports to leadership and build situational understanding. Feedback from leadership regarding additional information requirements is processed to continue to further develop the COP.</p>
Infrastructure Systems	Based on the size of the impacted area, the timeline for restoration of essential infrastructure will be unknown until the severity of the damage is assessed. High winds and flooding damage all types of infrastructure in the affected area. Assessment of critical information for stabilization and repair will require equipment, expertise, and resources that are available to perform the necessary repairs. A shortage of resources to conduct assessments of infrastructure areas may delay overall response actions. Private sector resources can require vetting credentials and identification of personnel, which will delay getting qualified individuals in the impact area to support infrastructure assessment and restoration. The size of the hurricane will cause nearby communities to be impacted by cascading effects and secondary effects on infrastructure. Essential systems (e.g., power, water, sanitation, food storage) required for life-saving and life-sustaining services will be the highest priority and may take resources away from the restoration of other sectors.

Regional Considerations

The following describes the background, history and potential impacts of tropical cyclones to the Caribbean Area of FEMA Region 2. Background information contained is based on data obtained from the following work efforts:

- Puerto Rico State Profile
- US Virgin Islands State Profile
- The President’s Long-Term Recovery Action Plan (January 1999)
- Building Performance Assessment Report, Hurricane Georges in Puerto Rico (March 1999)
- Hurricane Georges Assessment: Review of Hurricane Evacuation Studies Utilization and Information Dissemination (April 1999)
- Puerto Rico Hazard Mitigation Plan (1999)
- Puerto Rico Hazard Mitigation Plan (2011)
- Virgin Islands Territorial Hazard Mitigation Plan (2011)

Puerto Rico and U.S. Virgin Islands are vulnerable to tropical cyclones. This is due to their location in the Northeast Caribbean Basin, low lying coastal areas, and the location of large and densely concentrated population within the coastal areas.

In this case, Puerto Rico and U.S. Virgin Islands lie along the northeast boundary of the Caribbean Sea, and are exposed to different types of waves, such as wind waves, winter swell and tropical cyclone forced waves. Another challenge is the complex bathymetry across Puerto Rico and U.S. Virgin Islands as well as the large population density along the coastal areas.

Irregular coastlines, steep bathymetry gradients and narrow shelf characterize the coastal morphology across the regional waters of Puerto Rico and U.S. Virgin Islands. In addition, tidal timing patterns can also set up the possibility for experiencing dangerous storm surges.

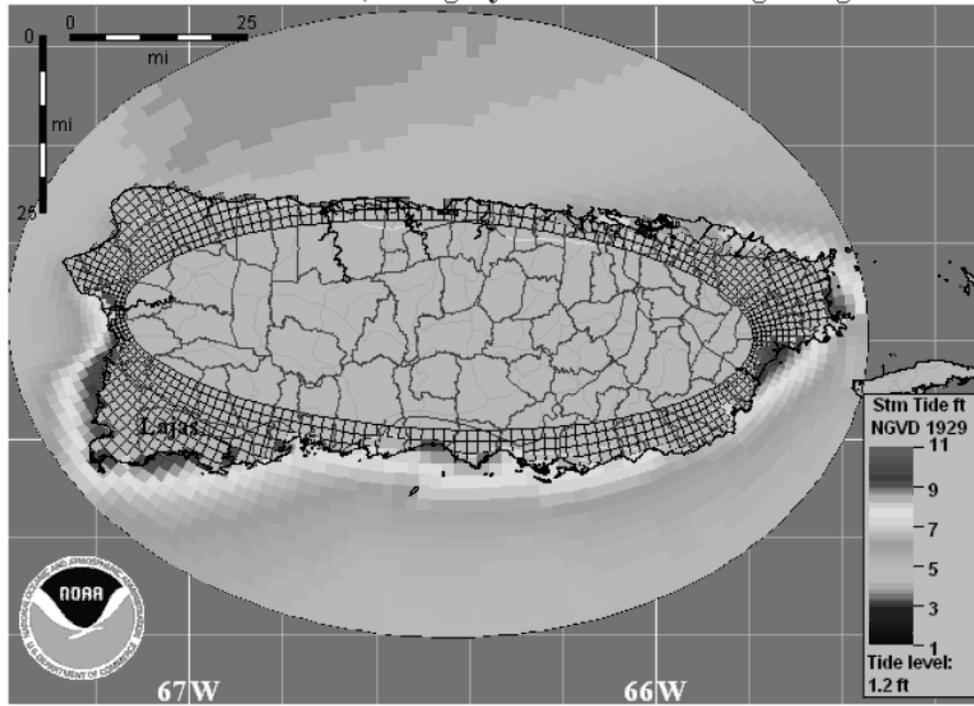
Currently, Caribbean islands such as Puerto Rico and the US Virgin Islands have limited guidance available to estimate the impacts of the tropical cyclone induced storm surge. State and federal emergency management use this limited information to plan the evacuation along coastlines when the islands are threatened by a tropical cyclone. NOAA/NWS and a group of universities are working very hard to develop a new high resolution mapping of potential storm surge threats for Puerto Rico and the U.S. Virgin Islands. In the near future, this new storm surge could replace or complement the actual low-resolution guidance of the NOAA's Sea Lake Overland Surges from Hurricanes (SLOSH) numerical model for Puerto Rico and the U.S. Virgin Islands.

Scenario development is based on the National Hurricane Program's Hurricane Evacuation Study Hazard Analysis methodology. Hurricanes are defined into five distinct, life safety threat scenarios. These are based on the categories of the Saffir-Simpson Hurricane Intensity Scale. Wind speeds and potential storm surge threats are developed using NOAA's Sea Lake Overland Surges from Hurricanes (SLOSH) numerical model. The meteorological parameters modeled that affect the storm surge heights include the tropical cyclone's intensity, measured by the storm-center sea-level pressure, the storm's track (path), forward speed, and radius of maximum winds. Exposure loss data is also based on the 100 and 500 year event as defined by published National Flood Insurance Rate Studies.

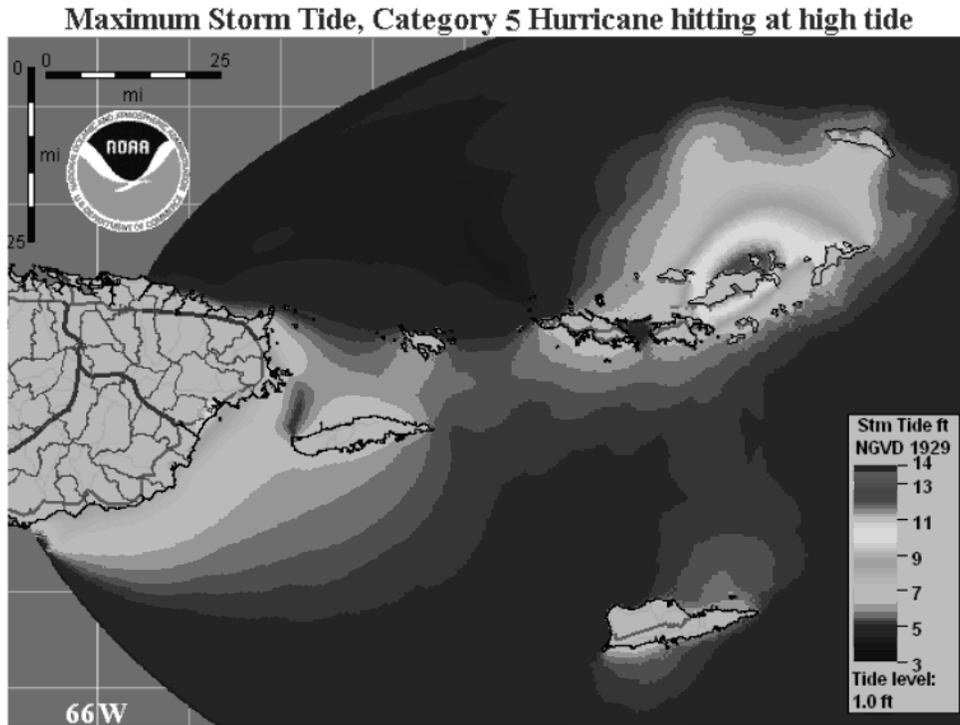
Below (including on the next page) are figures / maps of the surge flooding risk for Puerto Rico and the US Virgin Islands. They are based on the results of the SLOSH model simulating maximum surge value for a Category 5 defined hurricane on the Saffir-Simpson Scale during high tide. These are included only for "reference". SLOSH imagery/data for Puerto Rico and the US Virgin Islands needs to be updated. That update may occur in 2015 or later.

**Figure A1-1:
Map of Surge Zones – Puerto Rico**

Maximum Storm Tide, Category 5 Hurricane hitting at high tide

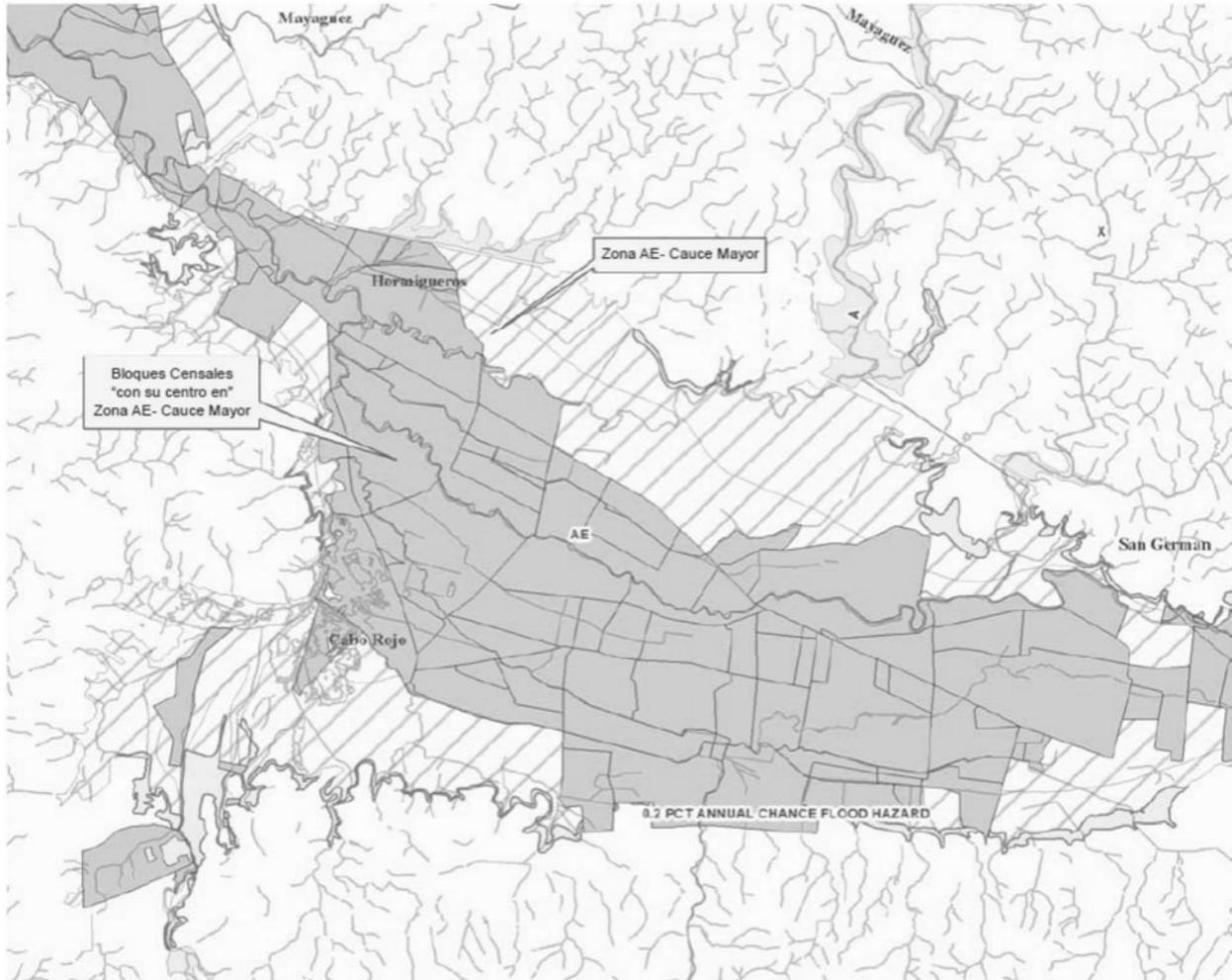


**Figure A1-2:
Map of Surge Zones – US Virgin Islands**



The graphic below is a sample of one of many flood zone maps available for Puerto Rico.

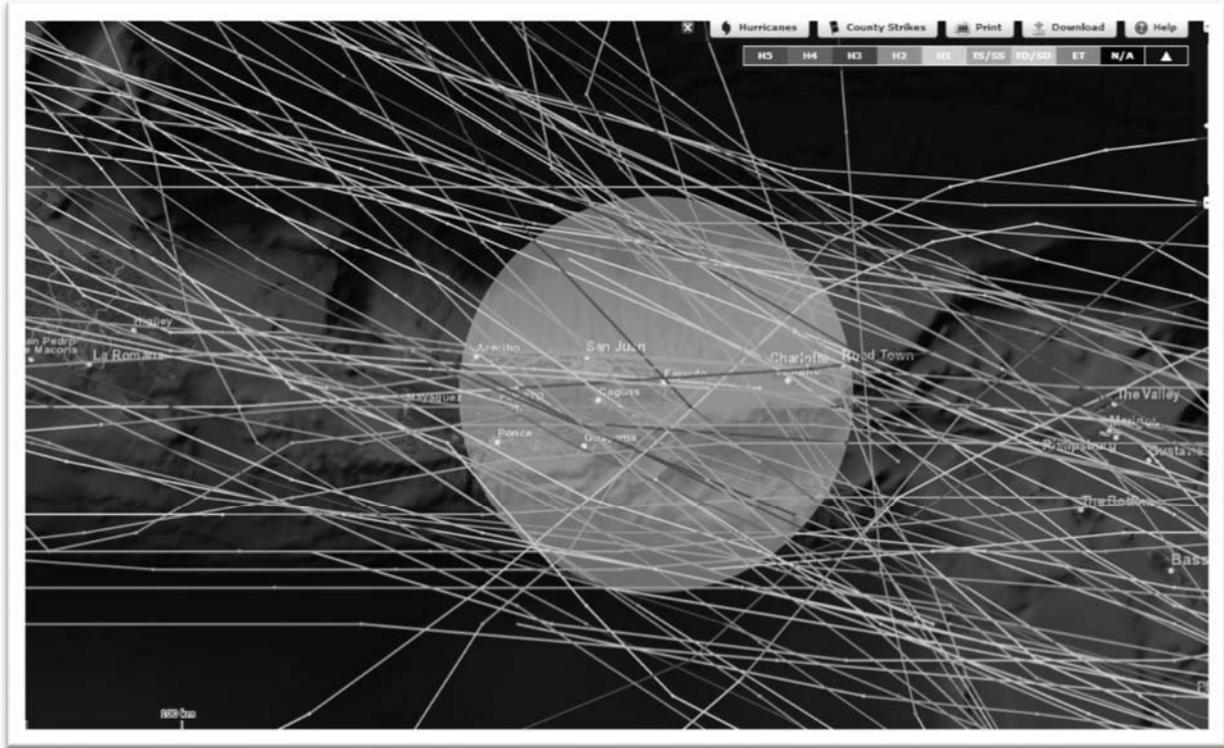
**Figure A1-3:
Map of Flood Zones – Puerto Rico**



For detailed versions of these images (and others in this document), contact the Geographic Information Unit of the Situational Awareness Section of the RRCC.

Puerto Rico and U.S. Virgin Islands have an active tropical storm and hurricanes history. These islands are characterized for having large population density along coastal areas and important infrastructure in the coastal areas, increasing their vulnerability to tropical cyclones. Numerous hurricanes have passed near or through the islands as shown in the map below.

Figure A1-4: Historical Hurricane Tracks Affecting Puerto Rico/US Virgin Islands Area



(Source: NOAA-Coastal Science Center. Key: Hashed Line-Unknown Type, Green-Tropical or Subtropical Storm, Yellow-Category 1, Orange-Category 2, Red-Category 3, Magenta-Category 4, Purple-Category 5)

The following table lists the number of recorded storms affecting Puerto Rico and U.S. Virgin Islands by month.

Table A1-4: Number of Recorded Storms Affecting Puerto Rico and US Virgin Islands, By Month. NOAA Historical Hurricane Data from 1842-2013.

Month	Puerto Rico	US Virgin Islands
June	0	0
July	5	5
August	18	21
September	23	23
October	3	11
November	3	4

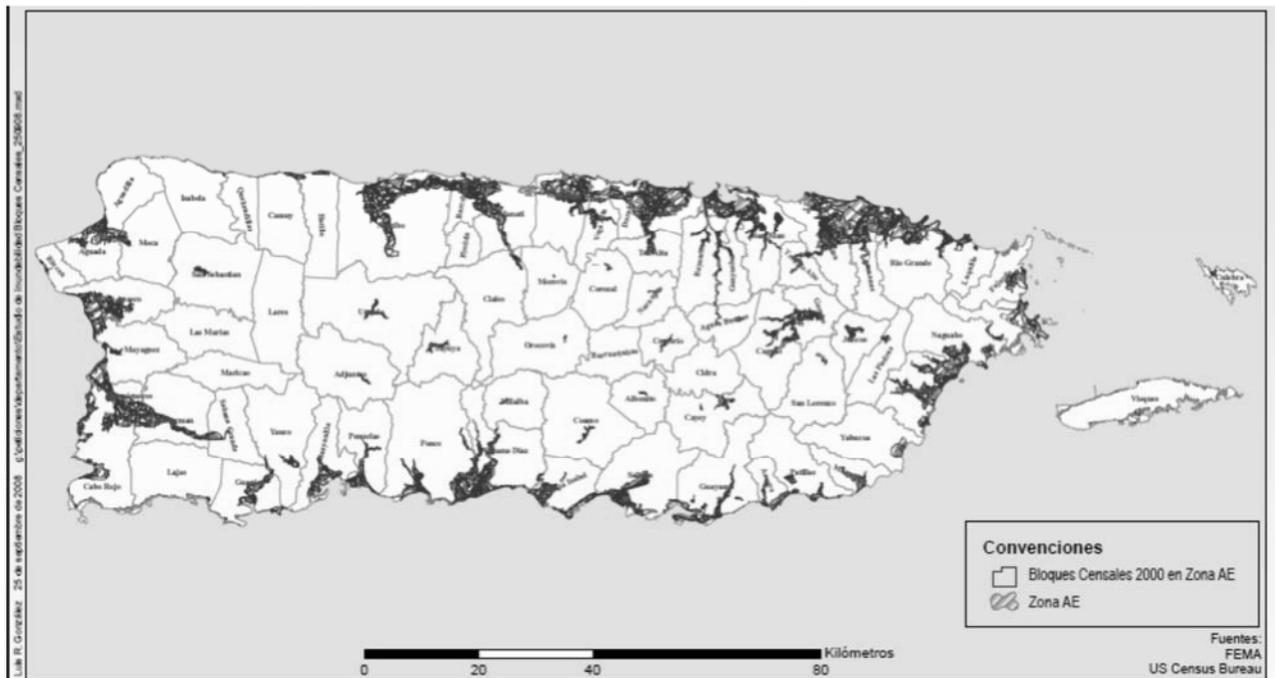
Hurricanes in the northeast Caribbean region are historically considered a high probability event. This can be seen in the following table (Table A1-5) identifying the mean return hurricane periods for the Caribbean Area by the identified five hurricane threat scenarios.

Table A1-5: Mean Hurricane Return Periods – Caribbean Area. Considering 171 year (1842-2013) of data for hurricanes passing near or through Puerto Rico and U.S. Virgin Islands

Return Period in Years for Hurricanes		
Category	Wind Speed	Return Period
1	74-95 mph	9.5 years
2	96-110 mph	8.2 years
3	111-130 mph	12.3 years
4	131-155 mph	24.6 years
5	> 155 mph	86.0 years

On the other hand, they are also designated a high impact event with widespread impacts based on the storm’s intensity, size, duration of event, rainfall impacts, area impacted and population evacuated or displaced. The coastal areas of Region II contain large and densely concentrated population centers. As a result, a great deal of residential, commercial and industrial property and land use is exposed to losses from flooding (storm tide and freshwater) and wind. Below is a sample of a series of flood maps for the various zones within Puerto Rico outlining the flood hazard areas across the island. These areas should be of particular concern during a hurricane.

**Figure A1-5
 Flood Inundation Maps from Puerto Rico for Zone AE**



Below is tabular data of those individuals and homes within the shaded areas of the flood maps. Each zone is listed with corresponding amount of people then the number of housing units they occupy. This may help in estimating response efforts/resources needed in an area threatened or affected by floodwaters.

Table A1-6: Puerto Rico Housing and Population in Flood Zones

Flood Zone	Estimated Population	Estimated Housing Units
Zone AE (Floodway)	43,861	17,101
Zone AE	320,027	124,033
Zone VE	11,838	6,897
Zone A	50,455	20,165
Zone AO	32,720	14,432
Source: Puerto Rico Planning Board		

Critical facilities also follow a similar pattern, with significant numbers exposed to flooding. This will prove problematic in providing essential services during and following a hurricane incident.

A major or catastrophic hurricane could impact up to 4 million residents. The impacts/effects could disrupt transportation across the entire Caribbean area. The tourist populations in Puerto Rico and the US Virgin Islands may also require additional mass care if they were stranded in the area right before the hurricane struck. At best, the region would suffer economic losses from tourists or seasonal visitors not being able to complete their vacation plans.

Recovery from a hurricane's aftermath would be impacted by the extent of power outages and the availability of fuel, which could lead to delay in services, travel delays and/or disruption in air and ground transportation. Damage or disruption may also take place at the port and marine facilities having commercial and/or military importance.

Tab 2 to Appendix 1: Situational Assessment

Critical Information Requirements and Essential Elements of Information may be found in the Base Plan within the Region II All Hazards Plan. However, tropical cyclones themselves present a unique list of information products produced by the National Hurricane Center and other stakeholders.

Hurricane Situational Assessment Objective: The RRCC Situational Awareness Section, with the Hurricane Liaison Team, will use products/tools to enhance situational awareness of potential and assessment of actual impacts. The Situational Awareness Section will coordinate with the Planning Support Section to ensure the appropriate products and tools are employed in the adaptation of deliberate plans and the development of adaptive plans (Regional Response Support Plans, Crisis Action Plans etc.). (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Situational Assessment

The Regional Watch Center and/or National Hurricane Center will disseminate information about threats in the Caribbean area of responsibility. Upon notification of a threat, coordination calls should begin with Whole Community stakeholders that include the National Weather Service-San Juan, Federal ESF's, Puerto Rico Emergency Management Agency, Virgin Islands Territorial Emergency Management Agency, and private sector partners.

The RRCC Situational Awareness Section has the overall responsibility to inform leadership of changes in conditions that may affect our ability to respond. The section is also in charge of facilitating the flow of information between Senior Leadership and operational personnel in the field. This is accomplished through briefings, conference calls, and inputs into the Regional Support Plan gathered from the stakeholders. The situational assessment is ultimately gathered from face-to-face interactions via State Liaisons and the IMATs. As the threat increases and response actions are initiated, the IMAT should provide situational assessment directly from on-scene sources. Information is also gathered from our ESF partners participating in the response effort. The National Hurricane Center provides a wealth of products and information on tropical cyclone intensity, forecast track, cascading effects, etc. A large portion of this Tab explains, in depth, those products, when they can be best used, and when they are available. Familiarization with the extent of NHC products will aid in presenting the most accurate information leading to the best decisions that can be made.

Situational awareness, post-landfall including the Recovery phase, is built through various programs like the Disaster Survivor Assistance, Individual Assistance, and Public Assistance. This network for information gathering captures details of response and recovery efforts across the area of operation and then reports information back to the Joint Field Office (and ultimately the Region and HQ).

The following graphic (Table A1-7) shows tropical cyclones products and tools according to when they are developed or used. As described below, they include Hurricane Evacuation Study products developed by FEMA, the USACE and/or NOAA, as well as weather and forecasting

products from the National Hurricane Center and the National Weather Center. Note the phases when these products and tools are used in the table below.

The remainder of this section indicates potential actions during these phases and entities responsible to perform them.

Table A1-7: Availability of Federal Tropical Cyclone Products through Time

Normal Operations	1b Elevated Threat	1c Credible Threat			2a-3a Activities
<i>Year Round</i>	<i>Hurricane Season 120-72hr</i>	<i>72-48hr</i>	<i>48-36hr</i>	<i>36hr-Landfall</i>	<i>Post Landfall</i>
HES products (surge MOMs, surge maps, evacuation zones, clearance times, other planning data) coastal flood loss atlas					
		USACE disaster impact model output			
		HAZUS output			
Tropical weather outlook					
Public advisory					
Forecast discussion					
Wind speed probabilities					
Track forecast cone					
		Wind timing via Hurrevac			Extreme wind warnings
		Surge MEOs			Tide gages USGS
		QPF rainfall forecasts			Flash flood warnings
		River forecasts	Flood outlooks		River flood warnings
		TS/hurricane watches	TS/hurricane warnings		
		Hurricane local statements			
		Storm surge probabilities			
		Potential storm surge flooding maps			
		Tornado watches and warnings			

Hurricane Evacuation Study Products

Although widely used in the continental United States, these products are readily available for the Caribbean. They are here for reference.

Evacuation Zones: Designed to identify high risk areas based on modeling created by Local, State, and Federal EMA representatives to move people out of hurricane hazard vulnerable areas.

Clearance Time: An evacuation time estimate that begin when the first evacuating vehicle enters the road network, and ends when the last vehicle reaches an assumed point of safety. They include travel time and waiting in congestion and is mainly driven by bottlenecks. Evacuation clearance time is determined by a number of factors including the number of residents to be evacuated, the expected behavior of those residents, roadway network characteristics, and hurricane shelter availability.

Planning Data: Vulnerability, shelter, and population data is produced through the multiple analyses of the HES that can be used for planning.

HAZUS Coastal Flood Loss Atlas (CFLA): A dictionary of possible coastal flood conditions and losses to support pre- and post- hurricane landfall strategies. The CFLA provides a County-by-county maximum potential flooding conditions for Category 1-5 hurricanes based on SLOSH MOMs and a County-by-county HAZUS loss estimates based on SLOSH MOMs.

National Hurricane Center Products

Tropical Weather Outlook: Is a discussion of significant areas of disturbed weather and their potential for development out to 48 hours. It includes (when possible) a nontechnical explanation of the meteorology behind the outlook. The Outlook also provides the chance of development (in percentage, from 0 to 100 in ten-percent increments) of each disturbance discussed in the outlook.

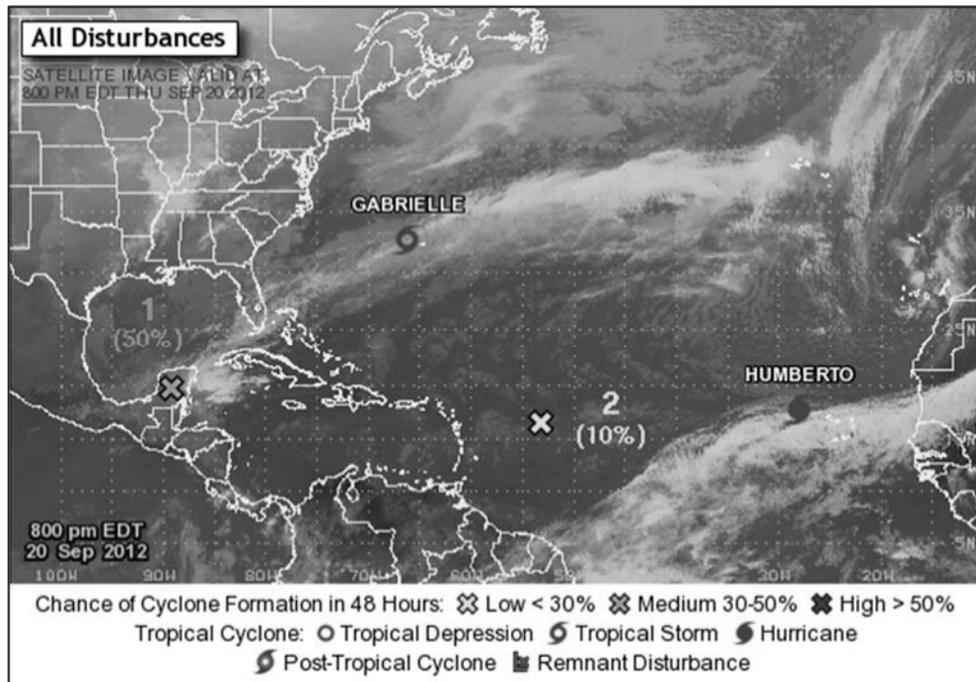
The NHC issues Special Tropical Weather Outlooks when important changes with areas of disturbed weather need to be conveyed before the next scheduled release of the Tropical Weather Outlook (TWO). The Special TWO can also be used on a recurring basis for disturbances outside of the normal hurricane season when routine TWOs are not issued. Special TWOs are issued under the same product headers as the TWO and they will supersede the previously issued regular or special TWO.

Please note the (Special) Tropical Weather Outlook has a companion Graphical Tropical Weather Outlook that will be updated at the same time.

Tropical Weather Outlooks also include a brief description of any tropical or subtropical cyclones in the region. During hurricane season, Tropical Weather Outlooks are issued four times a day. Atlantic outlooks are issued at 2:00 AM EDT, 8:00 AM EDT, 2:00 PM EDT, and 8:00 PM EDT.

Graphical Tropical Weather Outlook: is intended to be a visual companion product to the text TWO. The NHC produces a graphical TWO four times daily in both the Atlantic and Pacific basins.

Figure A1-6. Graphical Tropical Weather Outlook: 48 Hour and Five Day



Public Advisory: Contains a list of all current watches and warnings on a tropical or subtropical cyclone. It also gives the cyclone position in terms of latitude and longitude coordinates and distance from a selected land point or island, as well as the current motion. The advisory includes the maximum sustained winds in miles per hour and the estimated or measured minimum central pressure in millibars and inches. The advisory may also include information on potential storm tides, rainfall or tornadoes associated with the cyclone, as well as any pertinent weather observations.

Public advisories are issued for all Atlantic and eastern Pacific tropical or subtropical cyclones.

Public advisories for Atlantic tropical cyclones are normally issued every six hours at 5:00 AM EDT, 11:00 AM EDT, 5:00 PM EDT, and 11:00 PM EDT (or 4:00 AM EST, 10:00 AM EST, 4:00 PM EST, and 10:00 PM EST).

Intermediate public advisories may be issued every 3 hours when coastal watches or warnings are in effect, and every 2 hours when coastal watches or warnings are in effect and land-based radars have identified a reliable storm center. Additionally, special public advisories may be issued at any time due to significant changes in warnings or in the cyclone.

Forecast Discussion: explains the reasoning for the analysis and forecast of a tropical or subtropical cyclone. It includes a table of the forecast track and intensity. Tropical Cyclone

Discussions are issued on all Atlantic and eastern Pacific tropical and subtropical cyclones every six hours. Special tropical cyclone discussions may be issued at any time due to significant changes in warnings or in the cyclone.

Tropical Cyclone Discussions for Atlantic tropical cyclones are normally issued every six hours at 5:00 AM EDT, 11:00 AM EDT, 5:00 PM EDT, and 11:00 PM EDT (or 4:00 AM EST, 10:00 AM EST, 4:00 PM EST, and 10:00 PM EST).

Wind Speed Probabilities: provides probabilities, in percent, of sustained wind speeds equal to or exceeding 34-, 50-, and 64-knot wind speed thresholds. These wind speed probabilities are based on the track, intensity, and wind structure forecasts and uncertainties from the National Hurricane Center and are computed for coastal and inland cities as well as offshore locations (e.g., buoys).

These text products are issued on all Atlantic and eastern Pacific tropical and subtropical cyclones every six hours at 0300, 0900, 1500, and 2100 UTC (learn about UTC time). Special tropical cyclone surface wind speed probabilities may be issued at any time due to significant changes in warnings or in the cyclone.

Cumulative – These values tell you the overall probability the event will occur sometime during the specified cumulative forecast period (0-6 hours, 0-12, 0-18, etc.) at each specific point. These values are provided in both the text and graphical formats. In the text product, the numbers are in parentheses. The graphical products depict only cumulative values. The text product is transmitted to users via normal NWS dissemination methods. The graphic is available on the internet from the National Hurricane Center and the Central Pacific Hurricane Center.

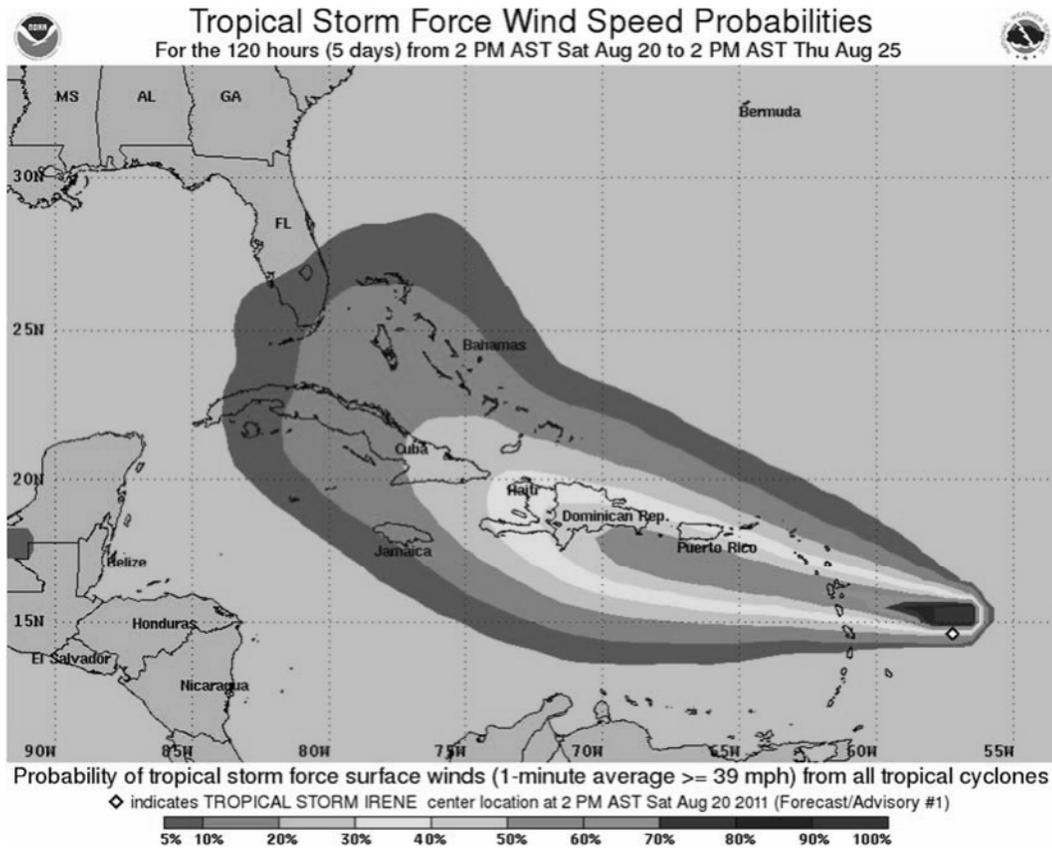
Individual – These values tell you the probability the event will start sometime during the specified individual forecast period (0 - 6 hours, 6-12, 12-18, etc.) at each specific point. These periods are individual, since nothing that occurs before or after the specified period affects the probability. These values are provided only in the text NHC product. They are the values outside of the parentheses (cumulative values are in the parentheses). The term "individual" also makes a clear distinction from the cumulative period values for users.

Incremental – These values tell you the probability the event will occur sometime during the specified forecast period (0 - 6 hours, 6-12, 12-18, etc.) at each specific point. These values are incremental since they can increase in value by accounting for the possibility the event might start in an earlier period and still be occurring in the specified period.

Wind Speed Probabilities Graphic: are created for each forecast/advisory package, but not all of these values are distributed or placed on the Internet. For each probability value, the event in question is a sustained (one-minute average) surface (10 m) wind speed of at least a particular threshold value (34 kt...39 mph, 50 kt...58 mph or 64 kt...74 mph) at a specific location.

Graphics for Atlantic tropical cyclones are normally issued every six hours at 5:00 AM EDT, 11:00 AM EDT, 5:00 PM EDT, and 11:00 PM EDT (or 4:00 AM EST, 10:00 AM EST, 4:00 PM EST, and 10:00 PM EST).

Figure A1-7. Tropical Storm Force Wind Speed Probabilities



Track Forecast and Cone: shows an approximate representation of coastal areas under a hurricane warning (red), hurricane watch (pink), tropical storm warning (blue) and tropical storm watch (yellow). The orange circle indicates the current position of the center of the tropical cyclone. The black line and dots show the National Hurricane Center (NHC) forecast track of the center at the times indicated. The dot indicating the forecast center location will be black if the cyclone is forecast to be tropical and will be white with a black outline if the cyclone is forecast to be extra tropical.

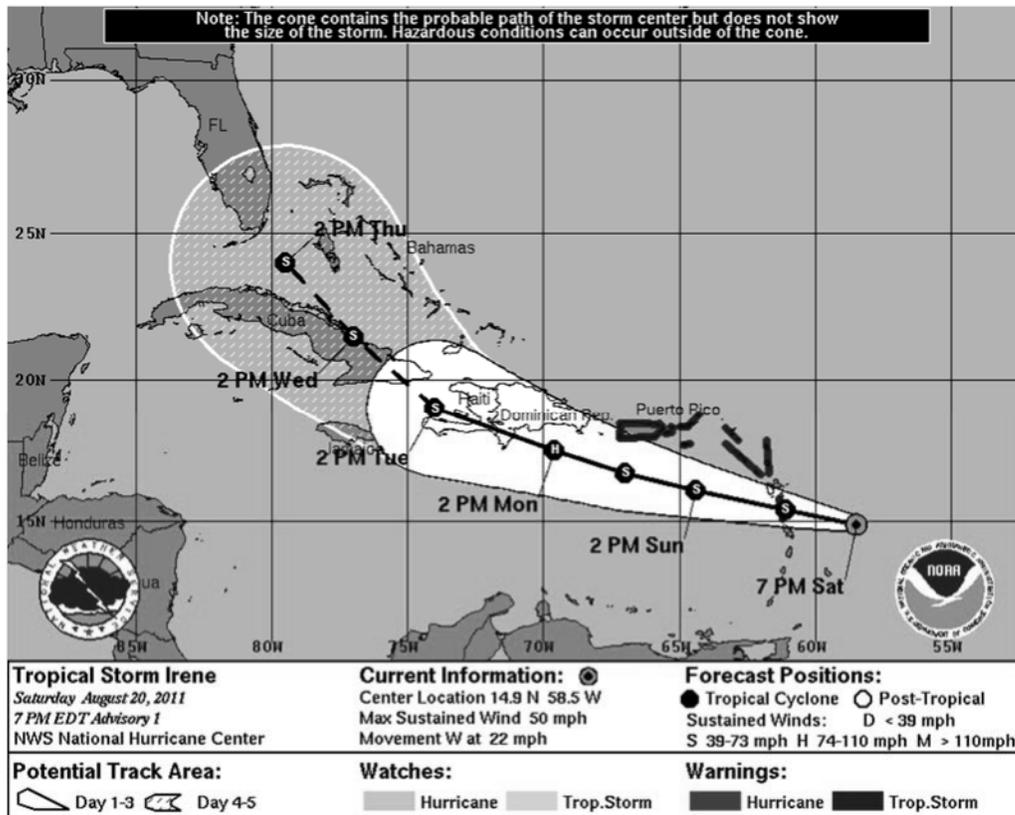
NHC tropical cyclone forecast tracks can be in error. This forecast uncertainty is conveyed by the track forecast "cone", the solid white and stippled white areas in the graphic. The solid white area depicts the track forecast uncertainty for days 1-3 of the forecast, while the stippled area depicts the uncertainty on days 4-5. Historical data indicate that the entire 5-day path of the center of the tropical cyclone will remain within the cone about 60-70% of the time. To form the cone, a set of imaginary circles are placed along the forecast track at the 12, 24, 36, 48, 72, 96, and 120 h positions, where the size of each circle is set so that it encloses 67% of the previous five years official forecast errors. The cone is then formed by smoothly connecting the area swept out by the set of circles.

It is also important to realize that a tropical cyclone is not a point. Their effects can span many hundreds of miles from the center. The area experiencing hurricane force (one-minute average

wind speeds of at least 74 mph) and tropical storm force (one-minute average wind speeds of 39-73 mph) winds can extend well beyond the white areas shown enclosing the most likely track area of the center.

Graphics for Atlantic tropical cyclones are normally issued every six hours at 5:00 AM EDT, 11:00 AM EDT, 5:00 PM EDT, and 11:00 PM EDT (or 4:00 AM EST, 10:00 AM EST, 4:00 PM EST, and 10:00 PM EST).

Figure A1-8. Five-Day Track Forecast Cone



Tropical Storm Watch: An announcement that sustained winds of 34 to 63 knots (39 to 73 mph or 63 to 118 km/hr) are possible within the specified area within 48 hours in association with a tropical, subtropical, or post-tropical cyclone.

Hurricane Watch: An announcement that sustained winds of 64 knots (74 mph or 119 km/hr) or higher are possible within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical storm force winds.

Tropical Storm Warning: An announcement that sustained winds of 34 to 63 knots (39 to 73 mph or 63 to 118 km/hr) are expected somewhere within the specified area within 36 hours in association with a tropical, subtropical, or post-tropical cyclone.

Hurricane Warning: An announcement that sustained winds of 64 knots (74 mph or 119 km/hr) or higher are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds. The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.

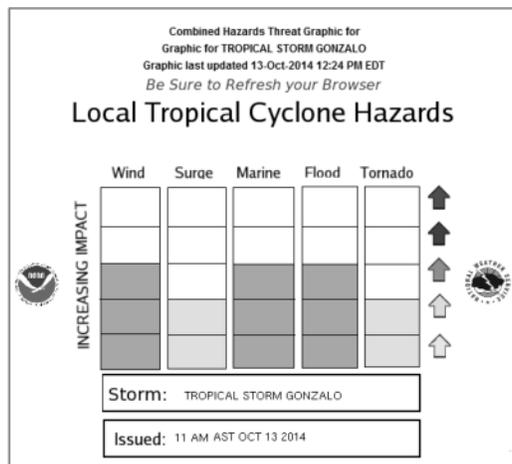
Storm Surge Maximum of the Maximums (MOM) and Maximum Envelope Of High Waters (MEOW): Are more appropriate tools for the continental United States. The data provided within the basins for Puerto Rico and the U.S. Virgin Islands do not capture the true and multi-pronged threat of storm surge conditions on the islands (including wave action/breaking waves). So although MOMs and MEOWs exist for the Caribbean, they underestimate the threat and are not included in this document.

National Weather Service Products

Hurricane Local Statements: These statements are not produced at the National Hurricane Center, but can be found through links in the NHC storm table when an active tropical cyclone threatens U.S. land. Local National Weather Service Weather Forecast Offices (WFOs) produce these local statements to keep the media, local decision makers, and the public current on present and anticipated storm effects in their area. The hurricane local statements contain essential hurricane or tropical storm information in a condensed form, but expand on the storm's potential effects on the local area and on any actions declared by local emergency managers.

The San Juan, PR WFO covers Puerto Rico and the Virgin Islands. With the approach of a threatening tropical cyclone, its website at www.srh.noaa.gov/sju/ provides hurricane local statements and other local weather information, such as the graphic on potential impacts for Tropical Storm Bertha shown in Figure A1-9 below.

Figure A1-9. Combined Hazard Threat Graphic Sample from NWS, San Juan Office



Tornado Warning: A warning issued to warn the public of an existing, imminent or suspected tornado. A tornado is a violently rotating column of air, usually pendant to a thunderstorm, with circulation reaching the ground.

Extreme Wind Warning: Extreme sustained winds of a major hurricane (115 mph or greater), usually associated with the eye wall, are expected to begin within an hour.

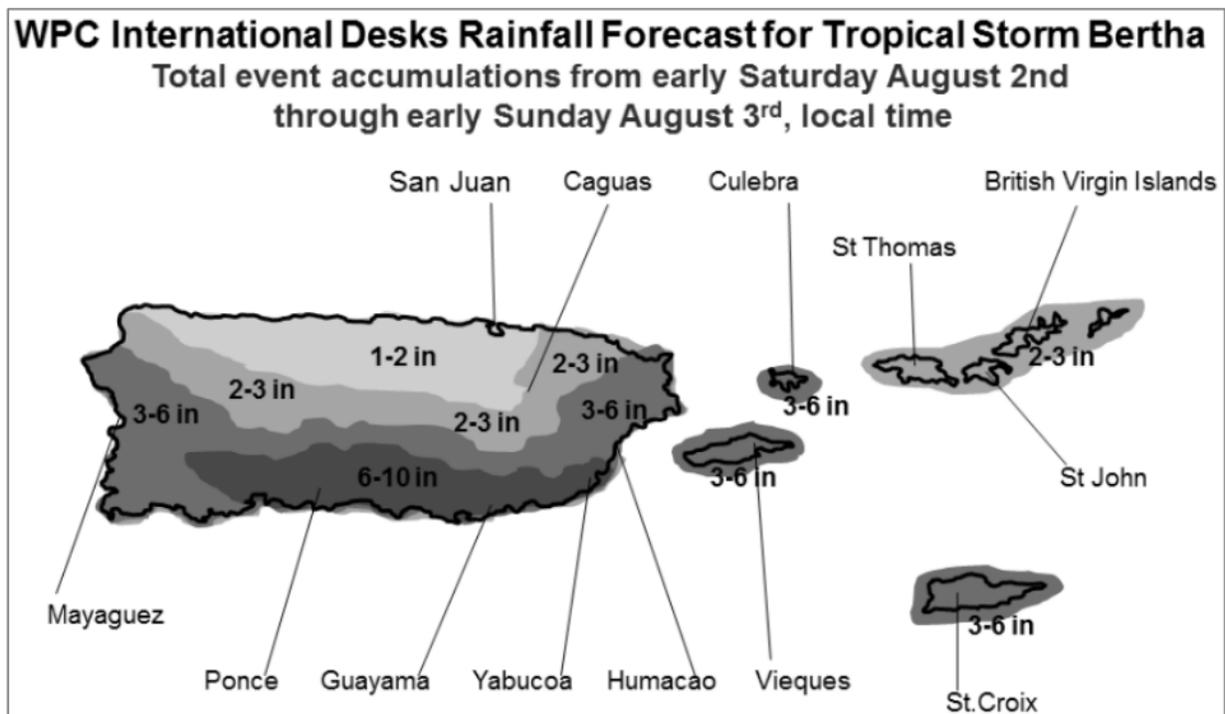
Flash Flood Warning: is issued to warn the public that flash flooding is imminent or in progress. A flash flood is a flood which is caused by heavy or excessive rainfall in a short period of time, generally less than 6 hours. Also, a dam failure can cause a flash flood.

River Flood Warning: is issued when the river stage at a "forecast point" is expected to reach or exceed bankfull (flood stage), causing the inundation of a normally dry area.

Flood Outlook: is intended to provide a general outlook for significant river flooding. It is not intended to depict all areas of minor flooding or small-scale events such as localized flooding and/or flash flooding.

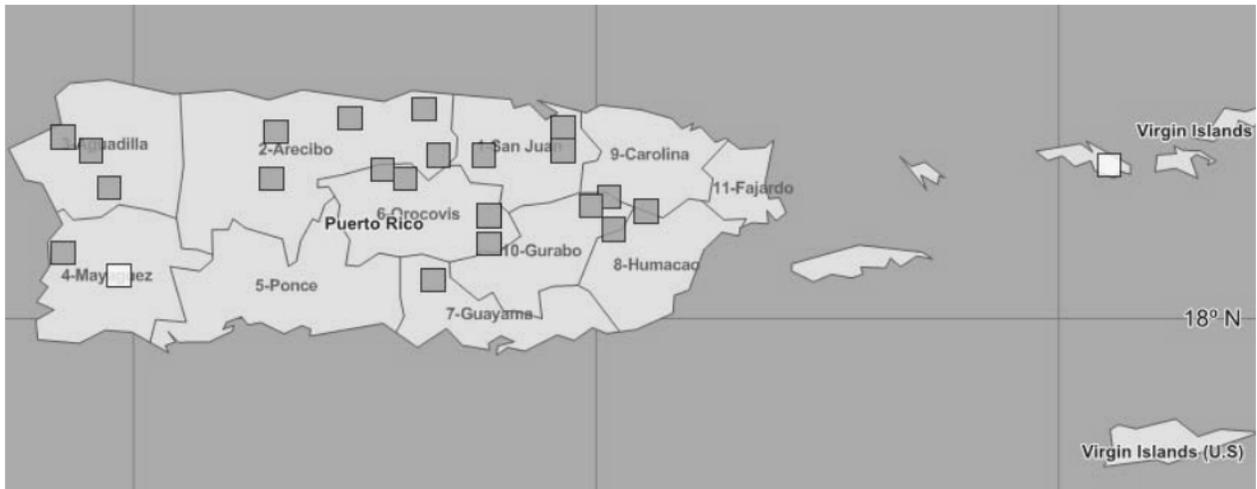
Rainfall Forecasts: Unlike the continental US, the NWS's Weather Prediction Center (WPC) does not compile generalized rainfall forecasts regularly for Puerto Rico and the Virgin Islands. For some events, however, it does provide special, one-time-only, total rainfall forecast for some events, such as it did for Bertha as shown below (Figure A1-10).

Figure A1-10



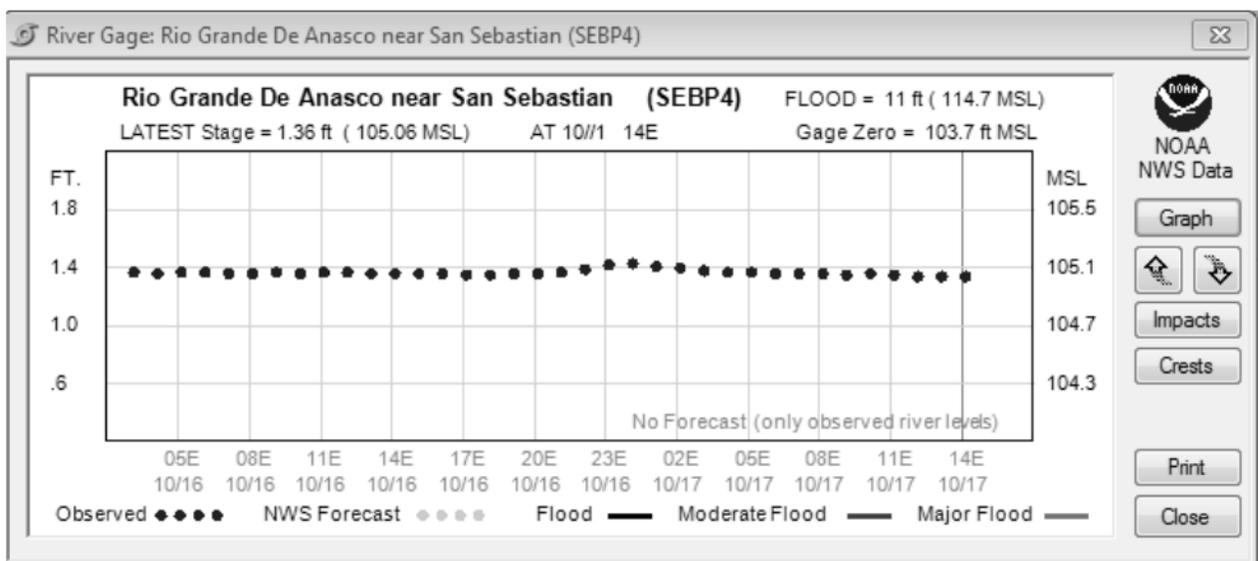
River Gage Data: NOAA's Advanced Hydrologic Prediction Service (AHPS) provides river gage data that are updated as often as every hour and can be obtained through HURREVAC. As indicated in Figure A1-11a, the stations in Puerto Rico are marked by squares indicating they provide data on *observed* levels only. They do *not* provide forecast data. The color of the squares indicates the river levels: green for below flood stage, orange for minor flooding, red for moderate flooding, and purple for major flooding. White indicates old or outdated data (or no data).

Figure A1-11a. River Gage Location Map



Stations with observations-only data typically provide 36 hours of past water levels. They also indicate the water level for flood stage. In the sample in Figure A1-11b, current river level is about 1.4 feet, about 9.6 feet below flood level of 11 feet.

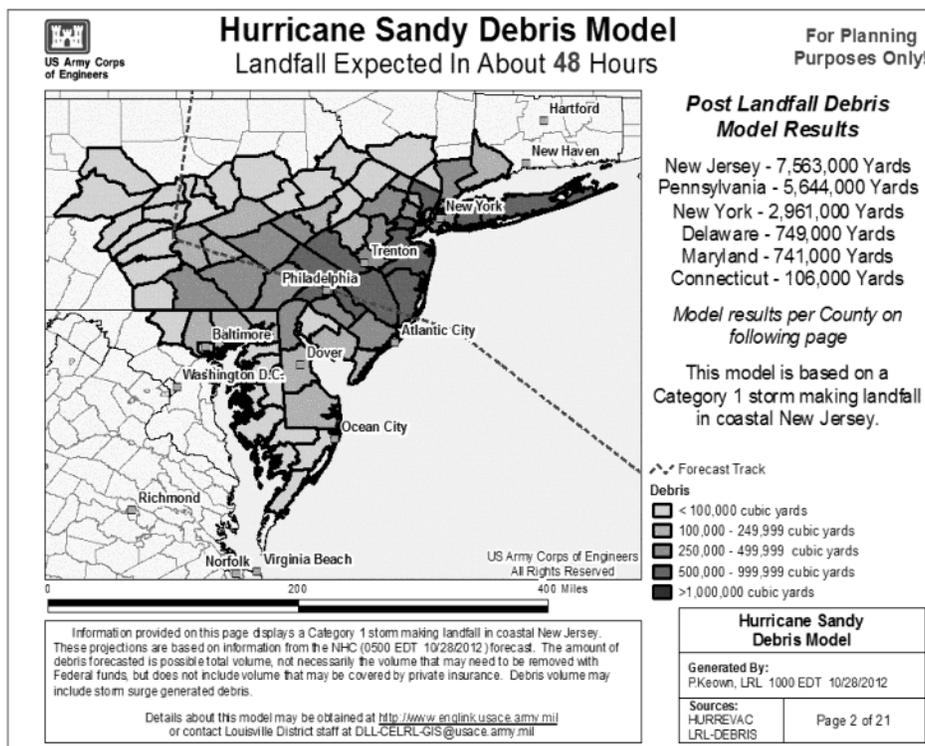
Figure A1-11b. River Gage Observed Water Level Data Sample



Additional Modeling Efforts

Disaster Impact Models: Through the use of geospatial tools, the USACE provides estimates of possible debris volumes, needs for commodities, number of people and households likely within hurricane force winds, and possible temporary roofing and temporary housing needs starting about three days prior to a forecasted hurricane landfall. Model estimates are developed and posted online at www.enlink.usace.army.mil. See Figure A1-12 for sample results for its Debris Model for Hurricane Sandy with landfall expected in about 48 hours.

Figure A1-12. USACE Disaster Impact Model: Debris Model Sample Output



Modeling Task Force (MOTF): The FEMA MOTF is a group of modeling and risk analyst experts that may be activated by the FEMA in support of disaster response operations. The group consists of individuals with experience in multi-hazard loss modeling and impact assessments, including hurricanes. The MOTF coordinates hazard and modeling information from a variety of sources, including other Federal agencies, universities, the National Labs, and State and local agencies, to develop consensus for best estimates of impacts before, during, and after events. The MOTF integrates observed information throughout disasters to “ground-truth,” verify, and enhance impact assessments.

National Hurricane Program

This program provides a critical set of emergency management tools and information to local, state and Federal government agencies to support their decisions in response to the safe evacuation and mass care of the threatened coastal population before the arrival of a major

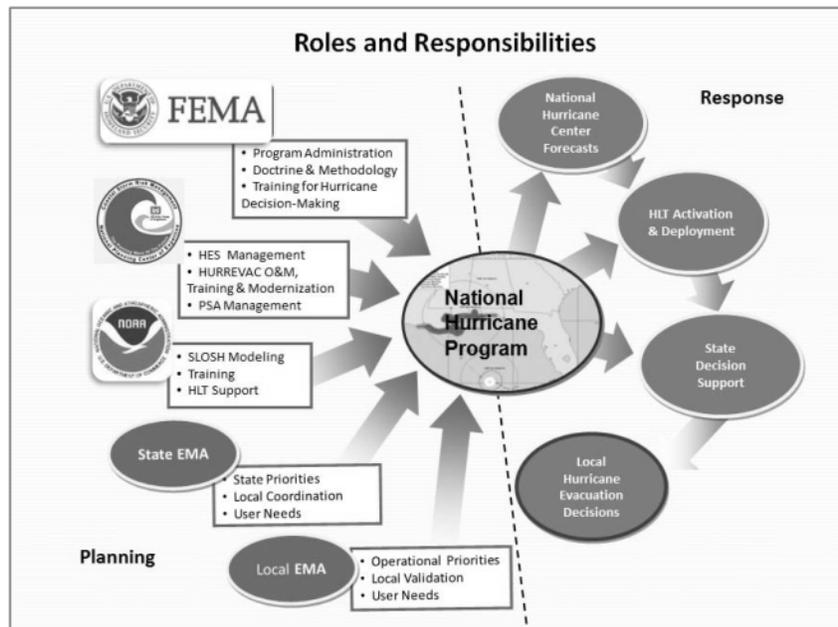
hurricane’s dangerous storm conditions. The eight components of the National Hurricane Program (NHP) described in Table A1-8 below. The Hurricane Liaison Team (HLT), which is one of these components, provides real-time operational support during the approach of threatening hurricanes. The HLT is described in more detail in the following section.

Table A1-8: National Hurricane Program Components

Hazard Analysis	SLOSH (Sea, Lake and Overland Surge from Hurricanes) Model development and simulations identify vulnerable land areas.
Hurricane Evacuation Studies (HES)	Establish the local evacuation zones and evacuation clearance times.
Real-Time Decision Support Tool (HURREVAC)	Identifies for local decision-maker the decision time for ordering the evacuation, and other decision guidance.
Training for State /Local Emergency Managers	Provides instruction on decision-making provided jointly by FEMA, NHC and USACE.
Real-Time Operational Support (Hurricane Liaison Team)	Provides an advocate & liaison for state/local partners at the NHC/Miami upon approach of the hurricane.
Local, State & Federal Coordination	ICCOH (Interagency Coordinating Committee on Hurricanes) receives state/local EMA input to the Program.
Technology Integration	Maintains NHP tools at the leading edge of technology, including the modernization of HURREVAC.
Post-Storm Assessment	Evaluates the use and performance of NHP tools for each major landfalling tropical cyclone.

The roles and responsibilities of the NHP are illustrated in Figure A1-13. Those for Planning, shown in reddish-brown to the left of the dashed dividing line, are part of normal operations that take place throughout the year. Response roles and responsibilities, including those for the Hurricane Liaison Team, shown in blue to the right, are part of response operations that take place during the approach of threatening tropical cyclones.

Figure A1-13. National Hurricane Program Roles and Responsibilities



Hurricane Liaison Team

The Hurricane Liaison Team (HLT) is one of the eight components of the NHP described above. As its name suggests, it is a team that acts as a liaison for hurricanes. The mission of the HLT is to support hurricane response operations and decision-making by local, state and federal officials through the rapid and accurate exchange of information between the National Hurricane Center (NHC), the National Weather Service (NWS) and the emergency management community.

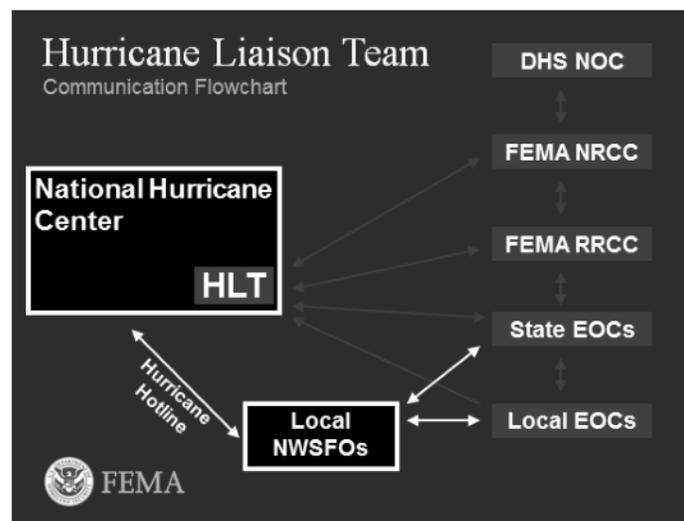
The Team is composed of the FEMA NHP regional program manager, hurricane specialists, and FEMA Reservist personnel. It is led by a fulltime FEMA Team manager detailed year-round at the NHC.

It acts as a liaison between the NWS and state and local emergency managers during the approach of threatening tropical cyclones. It does this to provide early and directly tailored information and guidance to the emergency managers on potential impending evacuation situations.

The HLT, activated and deployed to the NHC and the Regional Response Coordination Center (RRCC), gathers and receives real-time information, data, analysis and forecasts from the NHC and other NWS services. It also receives situation reports, issues, and concerns from the emergency management community to share as appropriate with the NHC and other NWS offices and centers.

It maintains open lines of communication among the NHC and appropriate Federal, State and local officials about the progress and threat level of the storm. In order to perform its liaison function among tropical cyclone forecasters, other NWS offices, and the national emergency management community, the HLT interacts and exchanges information with all of the organizations depicted in Figure A1-14 below.

Figure A1-14. Hurricane Liaison Team Communication Flowchart



Tropical systems pose multiple threats including wind, storm surge, inland flooding and tornado activity. Therefore, it is essential that the various centers of the NWS are included in information exchanges to ensure the emergency management community has a complete picture of the potential impacts and can take the necessary preparatory actions.

Accordingly, a variety of NWS participants at the National, Regional and local levels are relied upon to provide ongoing information and analysis. The HLT assists the NHC and the emergency management community by bringing all the participants together.

The HLT establishes and facilitates video/teleconferences with the NHC/NWS, FEMA and other Federal agencies, and State Emergency Operations Centers (EOCs). It also responds to emergency management questions and concerns.

Region II Hurricane SOP

Region II has *Hurricane Liaison Team Activation Standard Operating Procedure (SOP)* that was finalized in March 2013. This SOP provides a checklist for responsibilities and tasks to be reviewed and/or performed immediately before, during, and after an activation of the Regional Response Coordination Center (RRCC). The focus of this document is to capture actions performed by those assigned to the:

- (a) Regional Team Lead at the National Hurricane Center, and
- (b) Regional Risk Analyst assigned to the RRCC.

An updated May 2014 draft of this *SOP* includes:

- Sample Storm Information Reports, including a storm summary report generated by HURREVAC. (Appendix A)
- A Task Schedule Template for tasks, including consolidated coordination calls, to be made after new NHC Forecast Advisories are issued. (Appendix B)
- A Decision Support Guidance Template for the 120 hours before the onset of tropical storm force winds. It includes sources of information (Appendix C).

For a copy of this draft SOP with its Appendices, contact the Regional Hurricane Program Manager.

Actions by Phase and ESF

Actions listed below are provided within the context of response phases and the staff/personnel responsible to perform them. They are potential actions to be taken; the list is suggestive and not all-inclusive.

Phase 1a – Monitoring / Normal Operations

End State: Information collection, analysis, and dissemination systems have been developed in accordance with existing plans.

ESF-5:

- Develop Information Collection Plan (ICP) and validate against EEIs/CIRs identified in the Region II All Hazards Plan.
- Operational checks of RRCC information-sharing system with State, Incident Management Assistance Teams (IMAT), and Federal partners at intervals determined by the RWC;
- Recurring training and exercises with personnel;
- Coordinate updating data sets required by the RRCC to develop the COP (e.g., current Department of Homeland Security [DHS] Homeland Security Infrastructure Program Gold critical infrastructure and key resources [CIKR] data sets);
- Coordinate geographic information system (GIS)-based situational assessment data with FEMA divisions to update their needs in all phases of an incident;
- Research and coordinate additional information sources that build portions of the COP; and;
- Provide pre-operational assessments for potential impacts of a tropical cyclone incident.

Phase 1b – Elevated Threat

End State: Existing information collection, analysis, and dissemination systems have been tested and updated accordingly. Documentation is produced and disseminated as necessary.

ESF-5

- Coordinate with Regional GIS personnel to identify potential software based modeling programs, define the desired modeling outputs, and initialize modeling efforts. If the incident has been addressed in deliberate planning, utilize any deliberate planning modeling products for initial impact estimates.
- Examine the Information Collection Plan (ICP), evaluate the identified EEIs against the actual incident, validate the CIRs with RRCC senior leadership, and modify as needed.
- Develop an input and reporting/products schedule, determine the reporting platforms for posting situation reports (WebEOC, Homeland Security Information Network [HSIN], etc.), and provide reporting schedule and product posting locations to external and internal stakeholders.
- Capture situational awareness metrics from key private sector partners are captured within 12 hours of RRCC/NRCS activation
- As ESFs are activated and deployed to the Regional Repose Coordination Center, (RRCC), the Situation Unit will provide each ESF lead with the EEIs/CIRs relevant to the incident that are being tracked. The ESF leads will be responsible for providing the Situation Unit with those EEIs/CIRs through the reporting mechanisms/times established by the Situation Unit.
- Utilize modeling, initial aerial assessments from the Interagency Remote Sensing Coordination Cell (IRSCC), AIR reports, and LNO information to continue the COP build out, refine situation reports, and narrow the analysis efforts (continue through all phases).

ESF-6

- Coordinate with the Regional Disability Integration Specialist (RDIS) or the RRCC Disability Integration Coordination Advisor for identification of functional needs populations/ communities/organizations within the impacted areas for both identifying support requirements and local survivor capabilities (continue through all phases).

ESF-11

- Query Puerto Rico and US Virgin Islands for information on available food inventories.

ESF-15

- Monitor social media and public media sources for EEIs and incident information and work with ESFs, Other Federal Agencies (OFAs), SMEs, and Risk Analysts to validate as possible (continue through all phases).

Phase 1c – Credible Threat

End State: Information collection, analysis, and dissemination systems have been coordinated across public, private, and nongovernmental sectors, as appropriate. Documentation is produced and disseminated as necessary.

All ESFs

- Conduct analysis of plan EEIs/CIRs and provide to RRCC Situation Awareness Section.
- Identify incident-specific EEIs and CIRs.
- Begin collecting and reporting EEI/CIR information.
- Continue capturing EEIs/CIRs per the validated ICP. As Liaison Officers begin arriving in impacted state(s), maintain communications and gather EEIs/CIRs from LNOs. Coordinate with LNOs to acquire initial State reports if they have not been made available before.

ESF-3

- Develop GIS Data Models from L-72 to L+24 on expected damages.
- Provide commodity teams to track commodities purchased by USACE or other agencies.

ESF-5

- SAS: Coordinate with GIS and the National Remote Sensing Center (NRSC) for the activation of the IRSCC and begin identifying a prioritized list of CIKR facilities/systems for aerial assessment.
- SAS: Identify and activate appropriate subject matter experts (SMEs) to conduct risk analysis in order to ensure safe deployment of Federal and contracted assets (e.g. Hurricane Liaison Team to provide guidance regarding surge inundation and expected time of flood waters receding).

Phase 2a – Immediate Response

End State: Preliminary information about the incident has been collected from all available sources. An initial situational assessment of the incident has been performed to determine the scope of Federal support.

ESF-1

- Ascertain status of transportation infrastructure: airports, seaports, roadways, bridges, tunnels, etc.

ESF-2

- Conduct initial evaluation of impacted States' ability or capability to provide situation reports (electronically or telephonically).

ESF-3

- Obtain information necessary to run commodity needs models and debris models and provide those projections.
- Report status of flood control, flood fighting projects and navigational channels.

ESF-5 (*Situational Awareness Section*)

- Collect information on the status of the incident in the impacted State governments.
- Coordinate with ESF-3 and ESF-12 to provide power outages and projected repair times to the NRCC within 12 hours of landfall.
- Coordinate with the RSS, Air Operations Branch to capture fly-over assessments from deployed/operating platforms.
- Ensure tracking for restoration of essential community services (i.e. SWEAT-Sewer, Water, Energy, Electricity, and Transportation) in support of state and local priorities is established (continue through all phases).

ESF-6

- Review initial Assess, Inform, and Report (AIR) reports coming in from Disaster Survivor Assistance (DSA) personnel being deployed and arriving in impacted areas

Phase 2b - Deployment

End State: Expanding information about the incident has been collected and validated. Situational assessments have been refined to inform command and control structures of the operational environment.

All ESFs

- Track and report location and duties of all resources assigned to the disaster operation

ESF-5:

- Continue situational awareness and conduct daily updates using appropriate technologies;
- Revise COP schedule with response personnel and synchronize with reporting schedule.
- Refine aerial assessment priorities and provide to IRSCC, Air Operations Branch, and coordinate with DCE for un-met assessment needs.
- *SAS:* As more resources -are deployed, employed, and State reporting capabilities increase, shift collection of EEIs/CIRs from un-official sources to official sources (continue through all phases).

Phase 2c – Sustained Response

End State: As the information flow is standardized, data has been further refined, distilled, and validated, providing decision makers with more comprehensive information necessary to facilitate operational coordination.

All ESFs

- Track and report location and duties of all resources assigned to the disaster operation
- Track progress of missions and assignments by appropriate metrics and report formats

ESF-5 (*Situational Awareness Section*)

- Continue situational awareness and conduct daily updates using appropriate technologies;

- Synchronize reporting mechanisms and schedule with Federal and State information sources
- Transition management of the COP to the JFO planning staff.
- Coordinate with Recovery personnel to identify analysis that needs to occur to aid in the transition from short-term recovery, including but not limited to the following:
 - Projected power restoration times and patterns.
 - Projected MDRC locations and potentially under-served communities.
 - Possible functional needs communities requiring specialized staff or equipment that could exceed recovery capabilities/resources.
 - Modeled impacts.
- Deactivate IRSCC mission if incident does not require.

Phase 3a – Short-Term Recovery

End State: Data has been further refined, distilled, and validated, providing decision makers with the information necessary to inform demobilization decisions and transition to recovery.

Situational reports on the functionality of critical infrastructure and essential government and commercial services have been disseminated to support the reintegration of survivors.

All ESFs

- Track and report location and duties of all resources assigned to the disaster operation
- Track progress of missions and assignments by appropriate metrics and report formats

ESF-5:

- SAS: Maintain a COP for recovery program needs so demobilization of assets can begin at the earliest opportunity; and
- Complete transition of RRCC functions to the JFO.

Appendix 2: Operational Coordination

During a tropical cyclone response, it is necessary to coordinate unity of effort across local incident commands, the affected states, and the Federal response. Federal activities will focus on supporting state and local needs as a result of major wind and flooding damage following the tropical cyclone incident.

Hurricane Operational Coordination Objective: Facilitate coordination of critical resources and establish command and control structures within threatened and impacted jurisdictions to meet basic human needs, stabilize the incident and transition into recovery. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Operations Coordination

During normal operations, the Region II Regional Watch Center conducts monitoring of tropical weather risks within the area of operations of FEMA Region II in coordination with the National Hurricane Center and the National Weather Service San Juan. In the event there is an identified tropical disturbance, the Region II Watch will actively monitor the disturbance throughout its life-cycle, regardless if there is a threat to the Region.

Once the Watch has identified a disturbance that meets the criteria of Elevated Threat, the Response Division Director, in coordination with the Regional Administrator, will activate the RRCC. Warning orders and/or activation orders may be issued at this time. In order to ensure effective command and control of Federal resources, the Response Division Director will activate the Caribbean Area Division IMAT for Puerto Rico, and deploy the Region II IMAT to the US Virgin Islands. The Caribbean Area Division IMAT will be labeled as IMAT Puerto Rico. The Region II IMAT will be labeled as IMAT USVI.

The RRCC is operational throughout all response phases to process resource requests that are facilitated by IMATs in the field. This is done by processing mission assignments and contracts, issuing the Regional Support Plan, updating HQ and other stakeholders. The resources acquired and staged by the RRCS, as well as the priorities and objectives of Puerto Rico and the US Virgin Islands become the starting point for the IMATs. The RRCS maintains the lead in coordinating activities until such time that the IMATs can validate operational control through the ability to perform functions listed above (process requests, issue mission assignments and contracts, etc.)

IMAT Puerto Rico will maintain communications with the Puerto Rico Emergency Management Agency (PREMA). The IMAT Puerto Rico may also assign branch directors/division supervisors to the twelve (12) PREMA zones to facilitate the request of resources.

IMAT USVI will be deployed from New York, NY to either St. Thomas or St. Croix, in coordination with the Virgin Islands Territorial Emergency Management Agency (VITEMA) director. The lead FEMA official (whether pre-designated FCO or IMAT Team Leader) must be

on the same island as the Governor. IMAT USVI will assign division supervisors to any island with an activated EOC, unless otherwise directed.

A major disaster declaration for either jurisdiction signals the beginning transition of the IMAT into an independently operating Joint Field Office. Again, the completed transition is marked by the ability of the JFO to validate operational control through the ability to perform functions listed above (process requests, issue mission assignments and contracts, etc.). The scenario may be severe enough that both jurisdictions would receive a major disaster declaration and thus separate JFOs. In this instance, an Area Command should be established to adjudicate resources that both Puerto Rico and the US Virgin Islands may be requesting in this remote and possibly austere environment. Due to space and access constraints, the Area Command is best located in Puerto Rico.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Federal department and agencies have utilized NIMS-consistent plans, training, and exercising to ensure a coordinated command structure.

ESF-5

- FEMA Region II will conduct periodic tests, training and exercises of staff to their specific roles consistent with the Regional Incident Support Manual (RISM), the All Hazards Plan, and this annex.

Phase 1b – Elevated Threat

End State: Situational reports have been analyzed and addressed to plan for the potential activation of Federal, regional, commonwealth/territorial, and local coordination structures in response to a tropical cyclone. Notifications including operations orders and Emergency Notification System (ENS) communications are issued as needed.

ESF-5

- The Watch in concurrence with the National Hurricane Liaison Team will notify and inform regional FEMA leadership of an elevated threat of a tropical storm/hurricane. Warning and Operations Orders will be developed and disseminated.
- The Response Division Director will activate the RRCC to the appropriate level based on current assessment of the storm track and intensity.
- The Regional Administrator will notify the FEMA Administrator that initial actions are underway in response to the elevated threat.
- The Chief-RRCS and Resource Support Section Chief will activate select ESFs.
- The Chief-RRCS and Resource Support Section Chief will coordinate with the impacted states and all appropriate parties to coordinate and synchronize Federal and state operations.
- SAS/RSS: Coordinate with the impacted areas to maintain shared situational awareness and understanding on the resourcing and delivery of required resources.
- The Chief-RRCS and all section chiefs will participate in daily NRCC video teleconferences.
- SAS: Develop and implement an Incident Information Collection Plan.

- *RSS*: Submit requests for surge account funding to begin mobilizing and deploying personnel and equipment, as necessary.
- *SAS*: Coordinate and request geospatial and geographic information system support needed for incident management.
- The IMATs will review pre-deployment checklists.

Phase 1c – Credible Threat

End State: Situational reports have been analyzed and assessed and federal coordination structures have been established.

All ESFs

- Identify Federal emergency assets and capabilities available for deployment.
- Conduct regional-level operational planning with Puerto Rico and the US Virgin Islands to develop unified response plans.
- Establish coordination and planning processes with other Federal and commonwealth / territorial departments and agencies.

ESF-1

- Coordinate aviation and maritime regulatory waivers, exemptions, and permits.

ESF-2

- Activate and deploy members of the National Communications System, including the Regional Emergency Communications Coordinator.

ESF-3

- Place appropriate planning and response teams on alert.

ESF-4

- Identify readiness of US Forest Service personnel available for OCONUS deployment.

ESF-5

- *RSS*: Determine the need to activate Federal resources in advance of formal requests for assistance.
- *RSS*: Reports all FEMA facilities and any FEMA team, detachment, or communications asset that is in place for more than six hours, using appropriate description and geo tag (continue through all phases).
- *RSS*: Coordinate activation of ESFs, the size and composition of the organizational structure, the level of staffing, and the key personnel required for the disaster response.
- *RSS*: Detect and resolve resource allocation issues.
- Establish a Federal support infrastructure in PR/USVI in anticipation of requirements for hazard response and recovery.
- *RSS*: Conduct resource allocation and tasking through the mission assignment process.
- *SAS*: Provide situation reports and other information, as requested, to the NRCC, in accordance with NRCC standard operating procedure(s) and protocols.
- *RSS*: Maintain accountability of all deployed Federal supplies and resources.

- *RSS*: Activate and deploy regional IMATs and other necessary teams to PR/USVI in order to establish an IOF/JFO and to begin coordination of the Federal response.
- *RSS*: Deploy appropriate incident support management personnel on site.
- *IMAT Operations*: Establish an IOF.
- Establish reporting and communications protocols with the activated agencies.
- Establish an Air and Maritime Operations Branches (potentially could be post-landfall)
- Ensure field facility locations are identified (ex. ISBs, RSCs, Field Hospitals, etc.)
- Analyze, prioritize, adjudicate, and allocate resources to identify and employ Federal resources to support operations.
- Engage in incident action, current, and future planning functions in coordination with the other ESFs engaged in the operation and with those who are operating under department and agency statutory authorities.
- *RSS*: Activate and deploy additional Federal assets and personnel, when requested and approved.
- Send qualified representatives to staff interagency EOCs (e.g., CBP, EPA, USCG) as rostered or directed.
- Activate and deploy U.S. Army Corps of Engineers ESF-3 Team Leaders and Assistant Team Leaders to the RRCC, and IOF (if available).
- Prepare and issue ESF-3 pre-declaration PSMA's for water, debris removal, commodities, and temporary power.
- Ensure that all facilities and field operations have operational capability (goal is within 48 hours following site acquisition).
- Process gubernatorial requests for major disaster or emergency declarations for PR/USVI (continue through all phases).

ESF-6

- Support the mobilization and implementation of mechanisms to track the movement of evacuees, resources, household pets, service animals, medical equipment, and luggage.
- Support the establishment, management, and operation of congregate and non-congregate shelters.
- Coordinate with Regional Volunteer Organizations Active in Disasters and NGO partners to provide personnel and equipment to support response.
- Evaluate evacuee reception capabilities throughout the impacted area, including individuals with disabilities and those with access and functional needs.

ESF-7

- Establish required field facilities (e.g., JFO,) and arrange for supplies and equipment to support Federal activities related to the management of an incident.
- Activate and deploy support vehicles and Mobile Emergency Response System (MERS) Emergency Operations Vehicles (EOV) near the area forecasted to be impacted so as to establish a temporary operating location for the FCO and support staff.
- Request space requirements from all partners.
- Source vendors and/or request ESF MAs to fulfill sustainment, replenishment, and transportation of all requirements.
- Notify vendors of incident and possible requests for support through the Federal Acquisition Service (FAS), as required.

ESF-8

- Deploy Incident Response Coordination Team (IRCT), response teams, and supplies, and provide liaisons to Federal, regional, and EOCs and JFOs.
- Coordinate the Federal response in support of emergency triage and pre-hospital treatment, patient regulation, and tracking.
- Provide professional and technical assistance for behavioral health, environmental health, food safety and defense, public health and medical.

ESF-9

- Identify and pre-deploy resources to staging areas.

ESF-10

- Coordinate with FEMA and local, commonwealth, and territorial officials to provide oil/hazardous materials response.

ESF-11

- If requested, provide technical support for feeding support for shelters.
- If requested, provide technical support for animal response.

ESF-12

- Serve as the Federal point of contact with the energy industry for information sharing and requests for assistance from private and public-sector owners and operators.
- Coordinate with the PR/USVI emergency management offices for emergency response fueling locations.

ESF-13

- Assess the need for Federal law enforcement support.

ESF-15

- Deploy initial ESF-15 personnel to IOF/JFO.
- Coordinate ESF-15 actions, including messaging and staffing, with Federal and PR/USVI partners.

Phase 2a – Immediate Response

End State: Communications have been maintained (or restored) with stakeholders. Gradual movement of resources has commenced which brings assets closer to the affected area.

All ESFs

- Maintain contact with field deployed elements and report activity as necessary.

ESF-1

- Identify temporary alternative transportation solutions to be implemented when primary systems or routes are unavailable or overwhelmed.

ESF-2

- Ensure communications capabilities are functioning between command and control nodes.

ESF-3

- Provide structural specialist expertise to support inspection of mass care facilities and urban search and rescue operations in coordination with ESF-9.
- Provide coordination, response, and technical assistance to support the rapid recovery and reconstitution of critical waterways, channels, and ports.
- Assist in the clearance of prioritized routes in need to support critical facilities and PODs
- Assist in power restoration of prioritized critical facilities.

ESF-4

- Provide radio communications systems to support firefighters, law enforcement officers, and incident response operations.
- Provide command, control, and coordination resources, to include incident management teams, area command teams, and multi-agency coordination group support personnel, to local, commonwealth, and territorial, and Federal departments and agencies.
- Prepare/Deploy emergency road clearance crews, as requested, to provide access routes through debris-blocked roadways.

ESF-5

- Establish Unified Coordination Group.
- *RSS*: Engage the private sector and NGOs to determine resource availability within the impacted area.
- Coordinate with local, commonwealth, and territorial representatives to conduct a rapid needs assessment of the impacted area.
- Establish a regional operations tempo (i.e., incident reporting timeline) in coordination with the impacted areas.
- Review Preliminary Disaster Assessments in order to recommend for major disaster declaration.
- Employing resources from pre-incident locations to operating locations.
- Deploying initial response resources or pre-positioned disaster supplies and sustaining comprehensive logistics support operations.

ESF-6

- Coordinate with local, commonwealth, territorial governments, and NGOs to facilitate the return of evacuees to their pre-disaster or alternate locations.

ESF-7

- Reviewing available leases inside the affected area to establish offices.

ESF-8

- Transport seriously ill or injured patients and medical needs populations from casualty collection points in the impacted area to designated reception facilities, utilizing the National Disaster Medical System and other Federal agencies as required.

ESF-9

- Stage and operate with local incident commanders as designated by PR/USVI (continue through phase 2b).
- Coordinate the resolution of conflicting operational demands for search and rescue response resources (continue through Phase 2b).

ESF-10

- Deploy ESF-10 personnel to response venues as needed, including the RRCC, JFO, PR/USVI/local EOCs, and affected area. As ESF-10 responders arrive on-site, establish incident/unified command structures.
- Coordinate with FEMA and local, commonwealth, and territorial officials to establish high-priority response objectives and needs.

Phase 2b – Deployment

End State: Based on shared situational awareness and operational analysis, the adjudication, prioritization, and allocation of resources and personnel have been coordinated through the lead agency's coordinating structure. Personnel and resource deployment has been initiated.

ESF-5

- *RSS:* Deploy continuity support teams to assist in reconstitution of critical government facilities and services.
- *RSS:* Deploy Logisticians and Field Officers to the JFO and/or Mobilization Center to assist with matching commodity donations from international donors to consignees, if required.

ESF-11

- Assist in data collection and information analysis to inform decisions on placement of temporary housing sites and staging areas and mitigate possible damage to natural and cultural resources.
- Conduct surveys of wetlands and archaeological sites; make biological assessments; make condition assessments of historic structures and museum and archival collections to assist with evaluating sites to inform planning and operational decisions.
- Facilitate whole community multiagency coordination with NGOs for animal response activities.

Phase 2c – Sustained Response

End State: Initial Federal resources have been distributed to the ISB, the Joint Field Office has been established, and IMATs have conducted necessary operations for the initial support of basic needs to disaster survivors. Response operations across the impacted area have been coordinated in accordance with NIMS.

All ESFs

- Ensure team and personnel rotation plans are developed and implemented.

ESF-1

- Provide longer-term coordination of the restoration and recovery of the affected transportation systems and infrastructure, if required.

ESF-5

- RSS: Begin expanding JFO staffing for recovery and assistance programs.

ESF-6

- Develop an initial temporary housing strategy to transition survivors from congregate to non-congregate alternatives and provides relocation assistance or interim housing solutions for households unable to return to their pre-disaster residence.
- Identify housing resources from the private sector and other Federal departments and agencies available to disaster survivors.

ESF-15

- Coordinate with the affected areas to identify community leaders (e.g. grassroots, political, religious, education, business, cultural, ethnic) and neighborhood advocacy groups to assist in the rapid dissemination of information, identify unmet needs, establish an ongoing dialogue and information exchange, and facilitate collaborative planning and mutual support for disaster response.

Phase 3a – Recovery

End State: Coordination elements are transitioning to long-term recovery operations and focus on reintegration of survivors and restoration of basic services via the National Disaster Recovery Framework.

ESF-5

- Deactivate selected ESFs that are no longer required to support operations.
- Implement demobilization plans.
- Close out MAs and process invoices of other Federal departments and agencies.
- Review after action reports and revise plans and procedures accordingly.
- Archive MAs and historical files/records maintained during the incident.
- Coordinate with other Federal departments and agencies to assess lessons learned for future planning requirements.

Tab 1 to Appendix 2: Public Information and Warning

Public information and warning will occur in advance of the storm in Phases 1b and 1c. Time preceding tropical cyclone landfall will permit issuance of advanced actionable messages to populations within and around the projected landfall. Information presented here comes primarily from the DHS Headquarters External Affairs and is relatively standardized nationwide.

Hurricane Public Information and Warning Objective: Provide public information to the impacted populations in coordination with Puerto Rico and US Virgin Islands governments. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Public Information and Warning

Planning for public information and warning is unique in the Caribbean. There is a high capacity for communication in Puerto Rico however the message must be conveyed in Spanish. In the US Virgin Islands, English is the predominant language however there is limited capacity.

Region II External Affairs, through the Caribbean Area Division, establishes initial messaging and products through the respective emergency management agencies. The CAD also maintains a contact list of all media outlets in the Caribbean. In the event of tropical disturbance, and activations of EOCs, Joint Information Centers (JICs) will be established with FEMA representation. The JICs may not be located at a DHS facility (JFO/CAD/IOF). The JIC may be located at the EOC or Governor's office. A review and tailoring of pre-scripted messages and fliers is ongoing throughout the different phases.

It is important to note that the program "Community Relations" was changed in 2013. It is now called Disaster Survivor Assistance (DSA) and it is managed by the Recovery Division during Phase 1A. In Phase 1B, DSA transitions to the authority of the Operations Section, with the IMAT, and eventually to the JFO.

Participation in establishing conference calls, briefings, press releases, fact sheets, flyers, etc. is an ongoing duty and only increases towards landfall and even after (during the height of response). Intergovernmental Affairs and Congressional Affairs are just a few of the units responsible for the various products and workload of External Affairs. Congressional Affairs is slightly different in the Caribbean due to the fact that Puerto Rico is a territory and the US Virgin Islands is a commonwealth of the United States. As such, they do not have the same congressional structure as the 50 states. Puerto Rico and the US Virgin Islands each have one, non-voting member within the House of Representatives. There is a significant Caribbean population that resides in the CONUS with representation in Congress that may require the more traditional Congressional Affairs approach/strategy.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Federal planning, training, and outreach activities have occurred in the absence of a specific threat.

ESF-15

- Exchange information and discuss strategies with state PIOs, Disability Integration Specialists, mass care staff, state Disaster Survivor Assistance (DSA) staff and partner agencies (including disability agencies and divisions) on a regular basis;
- Outreach to PR/USVI during Hurricane Preparedness Week.
- Respond to inquiries from key EA stakeholders about tropical cyclone preparedness.
- Region II External Affairs maintains the capability to respond to an ESF-15 activation by:
 - Planning:
 - Update the Region II Hurricane Annexes (External Affairs sections) annually.
 - Update the initial strategic communications plan (includes all functional areas), the RRCC SOP, RRCS position checklists and other resources annually.
 - Staffing:
 - Pre-identify and train key staff to support rapid field deployments
 - Training:
 - Regional Staff:
 - ❖ Participate in internal and external exercises.
 - ❖ Cross-train staff on multiple functions; including Regional Disability Integration Specialist disability awareness
 - ❖ Develop training plans for all surge staff; including disability awareness
 - ❖ RRCC and key spokesperson training
 - Reservists:
 - ❖ Select Reservists for each EMI and DRWD training opportunity and encourage Reservists to take online independent study courses and training offered at JFOs.
 - Products:
 - Review/refresh/update the following:
 - ❖ Templates, standard fact sheets and backgrounders
 - ❖ Demographic data, including disability data sets for a given area/state
 - ❖ Training, liaison and reference guidelines for writers
 - ❖ Contact lists, check lists, field guides
 - ❖ Key communications triggers matrix
 - ❖ Flyers, pamphlets (pre-approved by states)
 - ❖ Provide in Accessible Needs formats/modalities
 - ❖ Media hot lists and RRCC media access policy
 - ❖ SOPs for media monitoring, photo and video preparation, archiving and uploading, including captioning and American Sign Language (ASL).

- Sample of Pre-landfall messages:
 - Movement of teams/commodities/assets to support federal response.
 - Final preparedness actions/what to do during/after storm makes landfall
 - Evacuation/movement inland; influx of people who need to be evacuated
 - Guidance for those who didn't evacuate, supporting local/state messaging.
 - Refine declaration specific messaging (pre-dec., emergency dec., post dec.)

- Logistical:
 - Field equipment and shipping cases (camera, video, cell phones, media monitoring, etc.) are working, charged and ready to go.
 - Logistics/IT is briefed on requirements for staff surge
 - RDIS coordinate with Logistics and IT to ensure that DRC Kits contain laptops that have accessibility tools to meet all survivor needs.

Phase 1b – Elevated Threat

End State: Pre-scripted messaging has been prepared for release.

ESF-15

External Affairs Officer Key Actions:

- Communicate with HQ, state PIOs, IMAT PIO and other federal agencies concerning planning activities, current situation, objectives, surge plans and staffing requirements.
- Identify and alert IMAT EA team member(s) for possible deployment.
- Deploy key staff to the RRCC, and develop a surge roster of field staff including Disability Integration Specialists, Field PIOs, photographer, and videographer, as needed.
- Meet with Logistics and IT to confirm surge requirements.
- Develop RRCC EA staff work schedule based on RRCC operational hours.
- Identify EA staff to fill Situation Unit

Resource Manager Key Actions:

- Check availability of EA Reservist cadre (per instruction of EAO).
- Process and implement staff deployments to multiple locations.
- Develop tracking mechanism for deployments.
- Ensure incoming EA staff is properly checked in.
- Identify and support resource requirements for photo/video and other field equipment

Planning and Products Key Actions:

- Initialize contact with activated ESFs
- Develop daily talking points and briefing materials on federal response preparations as needed.
- Establish a daily communications summary/EA daily plan and provide to the EAO (EAO designated by DHS Office of External Affairs).
- Ensure information is properly sourced, approved and accurate prior to dissemination.
- Brief writers on RRCC EA policies and procedures.

- Monitor and provide updates/feedback to HQ products and ensure unity of information in RRCC products.
- Support all EA staff on product requirements, including:
 - Talking points/news releases/PSAs/fact sheets/backgrounders
 - Flyers
 - IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features
- Support all EA staff on reporting requirements, including:
 - Regional Support Plan (ESF 5)
 - Situation Report (ESF 5)
 - Daily Communication Summary (ESF-15)
 - Daily Plan (ESF 15)
- Coordinate with Resource Management to ensure timely translation of products.
- Ensure writers place drafts in RRCC SharePoint folder for External Affairs
- Attend daily debriefing/communications calls with field deployed EA staff.

Joint Information Center Key Actions:

- In coordination with the Chief of the RRCs/Ops chief, brief RRCS and activated ESFs on the possibility of media presence
- Support News Desk and respond to incoming media inquiries in the RRCC as needed.
- Disseminate and conduct outreach on tropical cyclone preparedness through traditional, social media and digital communications.
- Initiates monitoring and issues daily clips and analysis, as needed.
- Broadcast Operations (videographer, photographer and producer) cover potential federal preparedness and response activities, and in coordination with FEMA HQ, upload products through approved site for posting.
- Reviews media access policy with ESF-15 staff and spokespersons.
- Before potential media visit to RRCC, coordinates with IT to have appropriate visual/backdrop on RRCC screen(s).
- Notifies security in accordance with media access policy and procedures.

Congressional Affairs Key Actions:

- Identify the congressional delegation in areas that could potentially be affected.
- Create matrix spreadsheet of potentially affected Congressional districts.
- Conduct initial outreach, including, but not limited:
 - Establish POC to provide updates to;
 - Assessment of need for more “hands-on” briefing with Members of Congress (MOC) and/or staffer to explain federal response activities, policy/procedures;
 - Provide federal preparedness and response activities; provide personal preparedness information (advisories, tips, widgets for MOCs’ websites)
- Track congressional inquiries by starting log of outreach activities; record questions, issues raised.
- Based on frequency and type of inquiries, assess the need for conference call with one or more of potentially affected congressional offices.
- Coordinate with EAO and JIC lead on potential hot issues that may also appear in media.

- Coordinate with HQ Congressional Affairs on all outgoing advisories and incoming inquiries.

Intergovernmental Affairs Key Actions:

- Prepare event-specific spreadsheet that includes the following:
 - Contact list for potentially affected PR/USVI governments.
 - Background data (past disasters, hot issues, etc.)
 - Record of office visits, interactions with stakeholder
 - Event outreach tracking
- In coordination with EAO and other EA components, send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.)
- Begin creation of IGA reference binder

Private Sector

- Prepare event-specific spreadsheet that includes the following:
 - Contact list for potentially affected private sector stakeholders.
 - Background data (past disasters, hot issues, etc.)
 - Record of interactions with stakeholders
 - Event outreach tracking
- Coordinate with HQ PS to assess national-level PS partners potentially affected by storm.
- Reach out to PR/USVI PS coordinator or POC to establish clear communication goals and expectations for PS component.
- Reach out to DHS Protective Security Advisor to establish infrastructure protection network.
- In coordination with EAO and other EA components, send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.)
- Based on outreach and assessment of need, schedule conference calls with shipping companies and corporations that have interests in potentially affected areas.

Phase 1c – Credible Threat

End State: Pre-scripted messaging is being adjusted, as required, and prepared for release.

ESF-15

External Affairs Key Actions:

- Implement surge plan in coordination with the PR/USVI PIO and DSA coordinators.
- Fully inform key stakeholders and field staff on a daily basis of current situation(s) and anticipated issues via conference call briefings, telephone call outs and advisories.
- Support evacuation and sheltering communications and staffing as required.

Resource Manager Key Actions:

- Continue to obtain required check-in information from EA staff.
- Continue to process and implement additional staff deployments.
- Update and maintain distribution lists, contact lists, staff rosters, call down lists and organization charts.
- Coordinate with training office to determine and implement specific training for incoming staff.
- Ensure product templates are current, and verify with potentially affected states
- Initiate and coordinate the LEP contract between HQ and the RRCC

- Format and distribute products.
- Continue to initiate, process and implement 143-0, 143-1 purchase requests.
- In coordination with JIC, create PR Newswire (Public Relations, not Puerto Rico) list for potentially affected media markets
- Continue to manage daily activities with RMs in the RRCC.

Planning and Products Key Actions:

- Continue liaison contact with activated ESFs
- Develop daily talking points and briefing materials on federal response preparations as needed.
- Prepare daily communications summary/EA daily plan and provide to the EAO.
- Ensure information is properly sourced, approved and accurate prior to dissemination.
- Monitor and provide updates/feedback to HQ products and ensure unity of information in RRCC products.
- Support all EA staff on product requirements, including:
 - Talking points/news releases/PSAs/fact sheets/backgrounders
 - Flyers
 - IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features
- IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features
- Coordinate with Resource Management to ensure timely translation of products.
- Attend daily debriefing/communications calls with field deployed EA staff.
- Coordinate with RDIS for messaging to functional needs audience.

Joint Information Center Key Actions:

- Assess field PIO training needs and develop training plan, as needed.
- Coordinate with RDIS to ensure preparedness messaging is available to functional needs populations in potentially impacted areas.
- Participate with the EAO and other leads to develop communications strategy.
- Continue to support News Desk and respond to incoming media inquiries in the RRCC as needed.
- Coordinate with FEMA HQ on media requests for activities that may be outside of Area of Responsibility.
- Continue to disseminate and conduct outreach on tropical cyclone preparedness through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.

Congressional Affairs Key Actions:

- Continue to coordinate with HQ Cong. Affairs on HQ-generated advisories.
- Coordinate messaging needs (briefings, fact sheets, etc.) with EAO, Planning and Products, and apprise EA leads of potentially upcoming issues.
- Conduct outreach to Congressional offices by phone and e-mail, including advisories and situational updates.

- Coordinate needs for Program SME presence on conference calls and delegation briefings with EAO.
- Continue to track congressional inquiries by logging outreach activities; record questions, issues raised.
- Ensure Congressional Affairs Field Resource Guide is completed.

Intergovernmental Affairs Key Actions:

- Continue to update event-specific spreadsheet, including contact lists, outreach, background information and inquiry log.
- Continue to relay messaging to stakeholders in potentially affected areas.
- Coordinate outreach with PR/USVI counterparts.
- Coordinate with potentially affected commonwealth, territorial, and local governments and associations (with PR/USVI government approval).
- In coordination with EAO, assess staffing needs.

Private Sector Key Actions:

- Refine event-specific spreadsheet that includes the following:
 - Contact list for potentially affected private sector stakeholders.
 - Background data (past disasters, hot issues, etc.)
 - Record of interactions with stakeholders
 - Event outreach tracking
- Continue to coordinate with HQ PS (NRCC) to assess national-level PS partners potentially affected by storm.
- Continue to coordinate with PR/USVI PS coordinator(s) or POC on all activities related that involve that PR/USVI governments.
- Continue to coordinate with DHS Protective Security Advisor to establish infrastructure protection network.
- Continue to send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.)
- Develop engagement plan for JFO.
- Based on outreach and assessment of need, schedule conference calls with shipping (air and sea) companies and corporations that have interests in potentially affected areas.
- Based assessment of need, determine needs for billboard advertising in affected areas.

Phase 2a – Immediate Response

End State: Based on preliminary incident assessments and information analysis, public messaging has been coordinated across local, territorial, commonwealth, and Federal jurisdictions. Initial public messages have been broadcast to applicable areas using available mechanisms.

ESF-15

External Affairs Key Actions:

- Communicate daily with surge staff leadership.
- Coordinate with HQ on situational awareness and staffing gaps/needs.
- Coordinate with JFO development team on needs for ESF-15 build out requirements.

Resource Manager Key Actions:

- Coordinate with RMs at surge location(s) to ensure staff accountability.
- Assess staff placement and coordinate any additional Reservist deployments.
- Create a tracking mechanism for accountable property and resources.
- Continue to maintain and update internal distribution lists, contact lists, staff roster, call down lists and organization charts.

Planning and Products Key Actions:

- Continue liaison contact with activated ESFs
- Develop daily talking points and briefing materials on federal response preparations as needed.
- Begin 3-day strategic communications and messaging plan
- Prepare daily communications summary/EA daily plan and provide to the EAO.
- Ensure information is properly sourced, approved and accurate prior to dissemination.
- Monitor and provide updates/feedback to HQ products and ensure unity of information in RRCC products.
- Support all EA staff on product requirements, including:
 - Talking points/news releases/PSAs/fact sheets/backgrounders
 - Flyers
 - IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features
 - Other support materials to other EA components
- Support all EA staff on reporting requirements, including:
 - Regional Support Plan (ESF 5)
 - Situation Report (ESF 5)
 - Daily Communication Summary (ESF-15)
 - Daily Plan (ESF 15)
- Coordinate with Resource Management to ensure timely translation of products.
- Attend daily debriefing/communications calls with field deployed EA staff.
- Coordinate with RDIS for messaging to functional needs audience

Joint Information Center Key Actions:

- Coordinate and responds to media requests and coordinates media events/briefings.
- Conduct daily coordination conference calls with surged staff.
- Continue to disseminate and conduct outreach on federal response and initial recovery messaging through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.
- Broadcast Operations (videographer, photographer and producer) cover RRCC activities, surge operations and commodity movements from the Atlanta area as appropriate and upload products to HQ for posting.

Congressional Affairs Key Actions in Phase 2a:

- Continue to track congressional inquiries by logging outreach activities; record questions, and issues raised.

- Provide recommendation for future staff roster to EAO and RM based on assessment of field needs.
- Conduct outreach to Congressional offices by phone and e-mail, including advisories and situational updates.
- Continue to conduct conference calls to apprise Congressional staff of most current situation, and provide background on federal response actions.
- Continue to coordinate needs for Program SME presence on conference calls and delegation briefings with EAO.
- Coordinate with IMAT EAO to identify need for cong. affairs field presence
- Facilitate requests with IMAT EAO for congressional delegation (CODEL) ride-alongs and federal response coordination meeting attendance.

Intergovernmental Affairs Key Actions:

- Continue to update event-specific spreadsheet, including contact lists, outreach, background information and inquiry log.
- Continue to relay messaging to stakeholders in potentially affected areas.
- Continue to coordinate outreach with PR/USVI counterparts.
- Coordinate with potentially affected commonwealth, territorial, and local governments and associations (with PR/USVI government approval).
- Continue to assess staffing needs in RRCC, field and for JFO.
- Continues to conduct daily outreach to commonwealth, territorial, and local governments to include email advisories/updates/press releases, as well as telephone call-outs and conference calls to apprise staff of most current situation.
- Finalize IGA reference transition binders.

Private Sector Key Actions:

- Continue to coordinate with HQ PS (NRCC) to assess national-level PS partners potentially affected by storm.
- Continue to coordinate with PR/USVI PS coordinator(s) or POC on all activities related that involve that state.
- Continue to coordinate with DHS Protective Security Advisor.
- Continue to send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.)
- Develop engagement plan for JFO.
- Conduct conference calls with all PS stakeholders who request information, as necessary, including but not limited to, shipping (air and sea) companies and corporations that have interests in potentially affected areas.
- Based assessment of need, determine needs for billboard advertising in affected areas.
- Begin JFO transition binder.
- Assess JFO staffing and resource needs; coordinate with Resource Management.

Phase 2b - Deployment

End State: Based on more comprehensive situational assessments, public messaging has been refined to meet the immediate needs of responders and the general public.

ESF-15

External Affairs Key Actions:

- Continue to engage all key stakeholders thru appropriate channels.
- At the direction of command staff, key ESF 15 staff will move forward to the JFO or to an Interim Operating Facility.
 - External Affairs support will remain with the RRCC until EA leadership is in place and the JFO and ESF 15 function are operational.
- Communicate daily with surge staff leadership.
- Coordinate with HQ on situational awareness and staffing gaps/needs.
- Coordinate with JFO development team on needs for ESF-15 build out requirements.
- Support Preliminary Damage Assessments (PDAs) as needed.
- Develop robust strategic communications plan for recovery efforts.
- Identify additional staff requirements.
- Transition EA operation at RRCC to the JFO.
- Prepare After-Action summary.

Resource Manager Key Actions:

- In coordination with the EAO, transition EA staff to IOF/JFO.
- Establish check-in process and checkpoint to ensure staff accountability.
- Continue to initiate, process and implement 143-0, 143-1 purchase requests.
- Coordinate any additional deployments with EAO.
- In coordination with P&P, to determine correct product format
- Research and assess needs for contractual services needed to support all components of EA.
- Format and distribute products.
- Maintain and update contact lists, staff roster, call down list and organization charts.
- Coordinates with RMs at surge location(s) to ensure staff accountability.
- Assess staff placement and coordinate any additional Reservist deployments.
- Continue tracking EA accountable property and resources. Assess further needs.
- Provide administrative guidance to staff on travel information and local lodging availability.
- Continue to maintain and update internal distribution lists, contact lists, staff roster, call down lists and organization charts.
- Continue to format and distribute products to internal, external and Media Vantage lists.

Planning and Products Key Actions:

- Continue liaison contact with activated ESFs
- Develop daily talking points and briefing materials on federal response actions as needed.
- Begin 3-day strategic communications and messaging plan
- Prepare daily communications summary/EA daily plan and provide to the EAO.
- Ensure information is properly sourced, approved and accurate prior to dissemination.
- Monitor and provide updates/feedback to HQ products and ensure unity of information in RRCC products.
- Support all EA staff on product requirements, including:
 - Talking points/news releases/PSAs/fact sheets/backgrounders
 - Flyers
 - IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features

- Other support materials to other EA components
- Support all EA staff on reporting requirements, including:
 - Regional Support Plan (ESF 5)
 - Situation Report (ESF 5)
 - Daily Communication Summary (ESF-15)
 - Daily Plan (ESF 15)
- Coordinate with Resource Management to ensure timely translation of products.
- Attend daily debriefing/communications calls with field deployed EA staff.
- Coordinate with RDIS for messaging to functional needs audience

Joint Information Center Key Actions:

- Refine key media lists and assignments in PR/USVI based on affected areas and key media markets.
- Conduct daily coordination teleconferences with surge staff.
- Transition Broadcast Operations (videographer, photographer and producer) from RRCC or surge facility to support field/PDAs/DRC openings. Upload products to HQ for posting.
- Provide PIO support for PDAs, shelter operations, mass evacuation sites, establishment of DRCs.
- Continue to disseminate and conduct outreach on federal response and initial recovery messaging through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.
- News Desk coordinates and responds to media requests.
- Coordinate and respond to media requests and coordinates media events/briefings.

Congressional Affairs Key Actions:

- Continue to conduct outreach to Congressional offices by phone and e-mail, including advisories and situational updates.
- Continue to track congressional inquiries by logging outreach activities; record questions, and issues raised.
- Continue to conduct conference calls to apprise Congressional staff of most current situation, and provide background on federal response actions.
- Continue to coordinate needs for Program SME presence on conference calls and delegation briefings with EAO.
- Facilitate requests for CODEL ride-alongs and federal response coordination meeting attendance.
- If a declaration is granted, provide information on the makeup of the declaration through e-mail advisory and follow-up phone call, or if necessary, conference calls.

Intergovernmental Affairs Key Actions:

- Continue to update event-specific spreadsheet, including contact lists, outreach, background information and inquiry log.
- Continue to relay messaging to stakeholders in potentially affected areas.
- Continue to coordinate outreach and staffing movements with PR/USVI counterpart.
- Coordinate with potentially affected commonwealth, territorial, and local governments and associations (with PR/USVI government approval).
- Continue to assess staffing needs in field and for JFO.

- Continue to conduct daily outreach to commonwealth, territorial, and local associations to include email advisories/updates/press releases, as well as telephone call-outs and conference calls.

Private Sector Key Actions:

- Continue to coordinate with state PS coordinator(s) or POC on all activities related that involve that PR/USVI.
- Continue to coordinate with DHS Protective Security Advisor.
- Continue to send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.)
- Conduct conference calls with all PS stakeholders who request information, as necessary, including but not limited to, shipping (air and sea) companies and corporations that have interests in affected areas.
- Based assessment of need, determine needs for billboard advertising in affected areas.
- Finalize JFO transition binder
- Refine JFO staffing and resource needs; coordinate with Resource Management.

Phase 2c – Sustained Response

End State: Public messaging has been refined to facilitate the transition to recovery.

ESF-15

External Affairs key Actions:

- Monitor human and pet sheltering status
- Monitor possible long-term housing mission and ESF-15 requirements
- Continue to engage all key stakeholders thru appropriate channels.
- At the direction of command staff, key ESF-15 staff will move forward to the JFO or to an Interim Operating Facility.
- Communicate daily with surge staff leadership.
- Coordinate with HQ on situational awareness and staffing gaps/needs.
- Coordinate with JFO development team on needs for ESF-15 build out requirements.
- Transition EA operation at RRCC to the JFO.

Resource Manager Key Actions:

- Coordinate with RMs at surge location(s) to ensure staff accountability.
- Assess staff placement and coordinate any additional Reservist deployments.
- Continue tracking EA accountable property and resources. Assess further needs.
- Continue to maintain and update internal distribution lists, contact lists, staff roster, call down lists and organization charts.
- Continue to format and distribute products to internal, external and Media Vantage lists.

Planning and Products Key Actions:

- Continue liaison contact with activated ESFs
- Develop daily talking points and briefing materials on federal response preparations as needed.
- Implement 3-day strategic communications and messaging plan
- Prepare daily communications summary/EA daily plan and provide to the EAO.

- Ensure information is properly sourced, approved and accurate prior to dissemination.
- Monitor and provide updates/feedback to HQ products and ensure unity of information in RRCC products.
- Support all EA staff on product requirements, including:
 - Talking points/news releases/PSAs/fact sheets/backgrounders
 - Flyers
 - IGA/congressional briefings
 - PS advisories
 - Scripts for video/specialty features
 - Other support materials to other EA components
- Support all EA staff on reporting requirements, including:
 - Regional Support Plan (ESF 5)
 - Situation Report (ESF 5)
 - Daily Communication Summary (ESF-15)
 - Daily Plan (ESF 15)
- Coordinate with Resource Management to ensure timely translation of products.
- Attend daily debriefing/communications calls with field deployed EA staff.
- Coordinate with RDIS for messaging to functional needs audience

Joint Information Center Key Actions:

- Coordinates and responds to media requests and coordinates media events/briefings.
- Conducts daily coordination conference calls with surged staff.
- Continue to disseminate and conduct outreach on federal response and initial recovery messaging through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.
- Broadcast Operations (videographer, photographer and producer) cover RRCC activities, surge operations and commodity movements from the Atlanta area as appropriate and upload products to HQ for posting.
- Refines key media lists and assignments in each state based on affected areas and key media markets.

Private Sector Key Actions:

- Refine JFO staffing and resource needs; coordinate with Resource Management.
- Based assessment of need, determine needs for billboard advertising in affected areas.

Phase 3a – Short-Term Recovery

End State: Public messaging content and dissemination mechanisms have begun to transition to pre- incident levels.

ESF-15

External Affairs key Actions:

- Conduct public/private events, workshops, or exhibits in each declared commonwealth or territory in ADA compliant sites to educate and inform the public/private sector on how to get disaster assistance (goal is within the first 21 days of JFO operations).
- Conduct public/ private events, workshops, or exhibits after 21 days of JFO operation, in each declared commonwealth or territory affected in ADA compliant sites to educate and

inform the public about effective personal preparedness measures (i.e., “safe rooms and safe room grants” personal preparedness kits; if operational factors permit, this requirement may be done prior to 21 days) are conducted.

- Develops robust strategic communications plan for recovery efforts.
- Identifies additional staff requirements.
- Prepares After-Action summary.
- Transition all EA/ESF-15 activities to the JFO(s).

Planning and Products Key Actions:

- Program Liaison maintains activated ESFs at the JFO(s).
- Develop daily talking points and briefing materials on Federal disaster assistance as needed.
- Implement 7-day strategic communications and messaging plan

Joint Information Center Key Actions:

- Transition Broadcast Operations (videographer, photographer and producer) from RRCC or surge facility to support field/PDAs/Disaster Recovery Center (DRC) openings.
- Upload products to HQ for posting.
- Continue to disseminate and conduct outreach on federal response and initial recovery messaging through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.
- News Desk coordinates and responds to media requests.

Private Sector Key Actions:

- Continue to coordinate with state Private Sector Coordinator(s) or POC on all activities related that involve PR/USVI.
- Continue to coordinate with DHS Protective Security Advisor.
- Continue to send information pertinent to potentially affected stakeholders through traditional methods (e-mail advisories, etc.).
- Conduct conference calls with all private sector stakeholders who request information, as necessary, including but not limited to, shipping (air and sea) companies and corporations that have interests in affected areas.
- Finalize JFO transition binder.

Tab 2 to Appendix 2: Public Health and Medical Services

Federal support of public health and medical services will provide life-saving and life-sustaining medical care to the affected population within and evacuated from the impacted areas. Response operations may be affected by infrastructure damaged by heavy winds, or by localized or widespread flooding and potentially by an overwhelming of the surviving healthcare systems.

Hurricane Public Health and Medical Services Objective: Within 24 hours of safe conditions, have teams on site at PR/USVI specified facilities to provide life-saving, life-sustaining services. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Public Health and Medical Services

Due to the limited availability of hardened shelter for personnel and storage for material for a tropical disturbance, the focus would be on limited pre-landfall deployment of teams; consequently, fewer resources would be requested pre-landfall than compared to a another region's hurricane plan. Two 50-person Disaster Medical Assistance Teams (DMAT) (one of which can be configured into two strike teams), two additional strike teams, and one Rapid Deployment Force (RDF) to staff two Federal Medical Stations (FMS) would be deployed pre-incident, with Mobile Acute Care (MAC) strike teams available for immediate deployment and setup at aeromedical points of embarkation (APOEs) should post-landfall aeromedical evacuation (AE) be required.

Post-landfall, one DMAT would be deployed to Centro Medico in San Juan so that the DMAT can provide emergency department (ED) decompression at the hospital, as well as one DMAT to a location TBD by PR Department of Health (PR DOH).

The strike teams would be deployed to provide basic medical care at locations TBD by PR DOH that are well away from the hospitals. (If the second DMAT has no assignment, the team could also be broken into strike teams for this mission.) Due to expected debris and the long travel distances, the goals for the strike teams are:

1. Intercept and reduce the number of potential patients heading to the ED/DMAT
2. Establish a vaccination "clinic" site for tetanus, Hep A, etc.
3. Provide wound care, i.e. suture small wounds, give antibiotics, wound checks, remove sutures, etc.
4. Assess pharmaceutical needs of the community and work with Logistics to fill those without the patient traveling to ED/DMAT to be seen
5. Evaluate need and coordinate use of evacuation of critical patients from remote areas.
6. Provide intel back to Incident Response Coordination Team of anticipated patient numbers headed for ED/DMAT
7. Provide staff augmentation to EMS if needed

Finally, due to the challenges of evacuating patients and populations, we expect to bring healthcare infrastructure to Puerto Rico post-landfall in the form of field hospitals (Blu-Med assets, EMEDS/CSH units), DoD floating assets, etc., in the event of a truly catastrophic incident that significantly damages the healthcare infrastructure in Puerto Rico.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Federal public health and medical operations plans have been tested and are readily available.

ESF-5

- Develop public health and medical centric PSMAs and exercise

ESF-8

- Identify gaps in public health and medical services capabilities in PR/USVI and coordinate plans to overcome shortfalls;
- Review response and recovery plans and update with increases or decreases in public or private sector capabilities; and
- Conduct recurring training and exercises.

Phase 1b – Elevated Threat

End State: Trained medical personnel and equipment are inventoried for potential deployment.

ESF-8

- Monitor tropical cyclone threat and review Regional Emergency Coordinator (REC) rosters and availability.

Phase 1c – Credible Threat

End State: Medical caches are staged or ready for deployment and information exchanges with commonwealth and territorial officials have occurred.

ESF-1

- In conjunction with ESF-8, identify transportation corridors available for medical transportation.

ESF-5

- Activate ESF-8.
- Coordinate with ESF-8 on incoming HHS teams and resources that require FEMA Logistics support (e.g.: staging, feeding, fuel etc.).
- Coordinate ESF-8 and Air Operations Branch and the Defense Coordination Element for support of medical evacuations.

ESF-6

- Coordinate with ESF-8 for information sharing of medical evacuees and final disposition of those individuals.
- Request ESF 8 support, as needed, to assess public health and medical needs for shelter-in-place populations, including the needs of at-risk population groups, such as language assistance services for limited English-proficient individuals and accommodations and services for individuals with disabilities that are receiving mass care services.
- Maintain database for shelter population and cross-references with medical evacuation.

ESF-7

- Coordinate with ESF-8 for staging of deployed ESF-8 resources.

ESF-8

- Support ESF-6 by providing expertise and guidance on the public health issues of medical needs populations.
- Identify immediate feeding, hydration, and bulk distribution (including durable medical equipment and consumable medical supplies) requirements for the affected area, and coordinate with Mass Care to support requirements;
- Identify gaps and solutions involving ESF-6 for mass care services that require ESF-8 support;
- Identify blood supply shortages and anticipated exhaustion levels and work with the American Red Cross and blood suppliers to develop strategies to meet these needs;
- Request deployment or redeployment of available Disaster Medical Assistance Teams (DMAT) to address public health shortfalls identified by each impacted PR/USVI;
- Validate operability of existing medical facilities and develop Needs Assessment for deployment of personnel and supplies.
- Establish information sharing with PR/USVI governments to communicate changes in shortfalls.
- Coordinate medical evacuation support as required; subtasks include:
 - Determine PR/USVI patient transportation capabilities,
 - Coordinate with the PR/USVI to designate airports to support patient evacuations,
 - Evacuate and track acute medical needs patients from medical facilities and nursing homes, and
 - Coordinate transportation support with DOD and other Federal agencies.
 - Determine status on Mobile Aeromedical Staging Facilities (MASF) and Disaster Aeromedical Staging Facilities (DASF)

ESF-11

- If requested, assist PR/USVI with managing animal response needs and provide technical assistance.

ESF-13

- Develop assessment and deployment of security support for shelters.
- Coordinate with PR/USVI partners for provision of additional personnel for security at medical staging locations, casualty collection points, and medical evacuation locations.

ESF-15

- Coordinate public information support activities including the public health messaging.

Phase 2a – Immediate Response

End State: Medical personnel have been alerted and initial information about the incident has been collected for preliminary operational analysis.

ESF-1

- Provide ESF-8 with routing information and provide assistance on any air movement of ESF-8 resources.

ESF-5

- Coordinate with ESF-3 and 8 for identification of critical public health care facilities in need of generator assistance.

ESF-7

- Coordinate with ESF-8 for logistical support of deployed/employed ESF-8 resources.
 - Determine commodities for sheltering and feeding
 - Determine staging and fuel support for HHS Teams

ESF-8

- Deploy and maintain situational awareness on deployed and available DMAT teams;
- Re-assess current incident and shortfalls and request additional DMAT teams and other personnel provided by Federal department and agency partners or the contracted options;
- Coordinate with PR/USVI and private sector hospitals to gain situational awareness regarding health and medical conditions; key elements include:
 - Survey available, operable bed space in impacted areas,
 - Coordinate medical and burn unit surge with health care facilities located outside the Region, and
 - Assess damage to hospitals and other key ESF-8 CIKR, including congregate care, hospitals, and emergency medical services;
- Provide and coordinate information with Federal department and agency partners to maintain COP;
- Assist with integration of additional PR/USVI, private sector, and EMAC-deployed resources; and
- Coordinate response for communicable disease control and environmental public health hazards.

Phase 2b - Deployment

End State: Based on information analysis, jurisdictional needs, and operational priorities, resources and personnel have been deployed to provide triage and initial stabilization of casualties.

ESF-8

- Provide medical support to PR/USVI decontamination teams, or other federal partners

- U.S. Public Health teams to provide primary care, mental health, public health services; mass prophylaxis and vaccination; Medical surge; Isolation and quarantine; Epidemiology/surveillance, Environmental Health
- Provide support to ESF-6 in providing Crisis Counseling and disaster case management: Crisis counseling, mental health and other similar immediate, short-term psychological assistance to disaster survivors.
- Deploy Public Health Rapid Deployment Forces, Applied Public Health Teams, Mental Health Teams, Services Access Teams as needed.

ESF-13

- Coordinate with ESF-8 for provision for force protection security.

Phase 2c – Sustained Response

End State: Federal medical response support has supplemented local, commonwealth, and territorial efforts to provide care to those likely to survive their injuries.

ESF-8:

- Integrate HHS pharmacy prescription support for a population if requested by PR/USVI governments.
- Leverage the current status of local medical capabilities, logistics/transportation, local impacts of an incident, and safety and security risk profile to meet the critical medical needs of the affected jurisdictions.
- PR/USVI health care providers and first responders that are not affiliated with a DMAT are notified of review the Medical Reserve Corps and the Emergency System for Advance Registration of Volunteer Health Professionals, and assist where needed.
- Review public health and medical support personnel needs, including Department of Health and Human Services (HHS) DMATs that are traditionally held in reserve or in “unavailable” or “standby” status which could be activated and deployed.
- Maintain coordination of patient evacuations with supporting Federal agencies; when mission is assigned, subtasks include:
 - DOD and the Global Patient Movement Requirements Center may coordinate evacuation of patients from the patient consolidated collection sites to the designated Federal Coordinating Center, and
 - The Joint Patient Assessment and Tracking System provides patient tracking data for any patients moved using the National Disaster Medical System (NDMS).
- Identify areas where objectives have been achieved and reposition or demobilize personnel when appropriate;
- Coordinate additional Federal, commonwealth, territorial, non-governmental organizations (NGO), and private sector health care providers and integrate additional resources to support operations;
- Integrate additional out-of-area resources provided through EMAC and develop strategy for augmenting or replacing the current Federal Government resources employed in the response; and
- Provide reports on the status of medical operations and objectives to maintain the COP.

Phase 3a – Short-Term Recovery

End State: Federal medical response support has begun to transition to pre-incident levels.

ESF-8:

- Coordinate long-term, post-incident public health education campaign with ESF-15;
- Provide support to PR/USVI governments to complete inspection of health care facilities and the repopulation of patients,
- Continue to monitor needs for a public health emergency and waivers of Section 1135 of the Social Security Act to ensure that sufficient health care items and services are available to meet the needs of individuals enrolled in Medicare, Medicaid, and the Children's Health Insurance Program; and
- Determine the status of medical monitoring and public health inspections of mass care facilities.

Tab 3 to Appendix 2: Environmental Response / Health and Safety

Federal guidance will be provided for environmental response and health/safety operations to support the affected communities, responders, and response partners. Localized or widespread flooding may cause additional challenges, and result in additional needs to support operations.

Hurricane Environmental Response / Health and Safety Objective: Deploy adequate environmental response capabilities within 48 hours to impacted jurisdictions to mitigate oil and hazardous substances spills or releases and prepare responders for contact with environmental hazards. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operations for Environmental Response / Health and Safety

The Environmental Protection Agency (EPA), the lead agency for ESF-10, routinely responds to chemical, oil, biological, and radiological releases. EPA provides support when requested or when state and local first responder capabilities have been exceeded. Through coordinating and implementing a wide range of activities, EPA conducts removal actions to protect human health and the environment. In carrying out these responsibilities, EPA coordinates with other EPA programs (including the Superfund remedial program), other federal agencies, states, tribes, and local governments. This coordination is done through On-Scene Coordinators and EPA's Special Teams. EPA's response is fairly standardized throughout the United States.

The EPA has the same geographic breakdown as FEMA. EPA Region II is responsible for New York, New Jersey, Puerto Rico, and the US Virgin Islands. The EPA Caribbean office is located in Guaynabo, Puerto Rico.

In the Caribbean, the EPA and US Coast Guard share the responsibilities of ESF-10. They both chair the Caribbean Regional Response Team (CRRT) that is responsible for preparedness activities including planning, training, and exercising to ensure an effective response to releases of hazardous substances and oil spills in Puerto Rico and the US Virgin Islands.

During Phase 1, the EPA and the USCG through the CRRT, provides support and training to commonwealth and territorial agencies, and private sector companies in environmental response and spill countermeasure strategies.

In Phase 2, ESF-10 will conduct debris removal of potential hazardous waste generated by the tropical cyclone. While every attempt is made to identify the owners of the waste, unidentifiable waste removal will be the responsibility of FEMA and the commonwealth or territory.

In Phase 3, ESF-10 will conduct air sampling to ensure that all waste is removed, and that the affected area is back to normal.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Ensure the availability of guidance and resources to address all environmental hazards including, but not limited to, hazardous materials (HAZMAT) and natural disasters in support of the responder operations and the affected communities.

ESF-5

- Develop PSMA's with ESF-10 and exercise.

ESF-10

- Ensure the all potential responders have the required pre-requisite personal protective equipment (PPE) training.
- Conduct regular inspections and maintenance of PPE.
- Maintain the availability of resources and adequately trained and equipped personnel engaged in response per Hazardous Waste Operations and Emergency Response (HAZWOPER) 29 Code of Federal Regulations (CFR) §1910.120 to address hazardous materials, acts of terrorism, and natural disasters in support of the responder operations and the affected communities.
- Maintain a stability metric that centers on the ability to establish a safe and secure environment for impacted communities and response personnel engaged in life-saving and life-sustaining operations.
- Conduct recurring training and exercises with potential or pre-identified field response personnel.

Phase 1b – Elevated Threat

End State: Federal environmental response/health and safety resources are identified and inventoried, special environmental risks and safety hazards are identified to the extent possible based on available information, and personnel are trained.

ESF-5

- Ensure FEMA/Office of Safety, Health, Health and Environment issues and guidelines are circulated through all agencies.

Phase 1c – Credible Threat

End State: Environmental response/health and safety resources have been readied for deployment in anticipation of support needed by response workers and the general public, and appropriate contact has been made with local, commonwealth, and territorial officials.

ESF-5

- Activate appropriate ESFs to provide coordination, technical assistance, and response to environmental/health and safety response.

ESF-7

- Coordinate with ESF-10 to determine if additional PPE is required for response
- Prepare and stage personal protective equipment (PPE).

- Deploy PPE to appropriate staging areas.

ESF-10

- Develop staffing plan for required resources that can be mobilized under Federal authorities (Environmental Protection Agency [EPA], U.S. Coast Guard [USCG], etc.);
- Begin protective messaging to responders and develop necessary protective protocols and equipment.
- Coordinate with PR/USVI partners to identify locations of hazardous materials storage, treatment, and disposal sites and other potential areas of releases of oil and hazardous materials;
- Coordinate protective measures for Federal assets being deployed to impacted areas with the On-Scene Security and Protection Capability Group/ESF-13;
- Coordinate public protective messaging with ESF-15, as necessary, including in accessible formats; and
- Determine necessary governmental teams and private sector support requirements and begin deployment and execution of contracts based on consequences and/or PR/USVI requests.

Phase 2a – Immediate Response

End State: Preliminary incident-specific information has been reviewed to determine initial environmental response/health and safety response actions, including the alert, staging, allocation, and mobilization of personnel and equipment.

ESF-3

- Coordinate with ESF-11 and state agricultural partners for potential requirements for the removal of animal carcass debris.
- Begin initial assessment for animal carcass removal requirements as a component of the debris removal mission in conjunction with ESF-3, 8, 10, and 11.
- In coordination with OSHA, begin protective messaging to responders and develop necessary protective protocols and equipment.

ESF-7

- Provide sourcing assistance for response and recovery worker access to required PPE.

ESF-8

- Provide technical assistance, advice, and support for medical surveillance and monitoring as required by regulation (e.g., asbestos and lead).
- Provide needs assessments, technical assistance, advice, and support for short and long-term occupational medical care and health services for response workers.

ESF-10

- Assess environmental conditions caused by the tropical cyclone and determine response priorities;
- Assess requirements for the use of Trace Atmospheric Gas Analyzer vehicles in impacted continental United States jurisdictions if airborne toxins are suspected;

- Assess requirements for the use of Airborne Spectral Photometric Environmental Collection Technology as a remote sensor to detect possible chemical releases and provide responders with additional information;
- Develop a plan prioritizing cleanup of identified HAZMAT incidents;
- The USCG assesses potential impacts from oil spills and develops response deployment plan;
- If a HAZMAT or oil spill has a technical cause or is a consequence of another incident, determine responsible party and assess any response capabilities to mitigate impact.

ESF-11

- Monitor environmental conditions and response activities and conduct sampling to determine impacts on Natural, Cultural, and Historical (NCH) Resources.
- Coordinate with ESF-3 on the removal of debris (when classified as debris) affecting NCH.
- Coordinate with ESF-10 on the removal of debris affecting NCH resources when that debris is contaminated by oil or hazardous material.

ESF-15

- Coordinate public information support activities, including posting environmental data summary results on websites and working with environmental and public health agency partners to develop public messaging regarding the impacts of the environmental contamination and appropriate public protective actions.

Phase 2b - Deployment

End State: Based on initial hazard assessments, Federal technical experts, in coordination with the affected jurisdictions, have identified initial high priority environmental response activities, public protective actions, and responder health and safety protective actions.

ESF-3

- Conduct animal carcass removal as a component of debris removal mission requirements.

ESF-5

- Begin protective messaging to responders and develop necessary protective protocols and equipment.

ESF-10

- Deploy adequate environmental response capabilities within 48 hours to impacted jurisdictions to mitigate oil and hazardous substances and prepare responders for contact with environmental hazards;
- Deploy appropriate personnel and strike teams utilizing MA or existing Federal response and/or funding authorities;
- USCG maintains response plans for every regulated maritime facility and provides necessary response information to the COP if impacted by an incident;
- Identify and evaluate site hazards and provide recommendations for PPE;
- Establish site-specific controls and PPE recommendations;
- Participate in the Joint Information Center and coordinate outgoing messages through Incident Command in coordination with PR/USVI jurisdictions; and

- Coordinate with PR/USVI partners to identify locations of damaged hazardous materials storage, treatment, and disposal sites and other areas of releases of oil and hazardous materials.

ESF-11

- Deploy animal carcass removal resources if carcasses are a result of an animal disease breakout.
- If requested, identify subject matter experts to provide technical assistance regarding proper disposal of animal carcasses.
- Coordinate with ESF-10 on the removal of debris affecting Natural and Cultural Resources and Historic Properties (NCH) resources.
- Perform assessments and surveys to assist with planning and operational decisions (e.g., temporary housing and sheltering plans).

Phase 2c – Sustained Response

End State: Predictive modeling data has been coordinated and disseminated, comprehensive hazard and risk assessments have been performed, and sampling and monitoring data has been collected. Planning, operational analysis, and delivery of environmental response/health and safety requirements have been coordinated across public, private, and nongovernmental sectors.

ESF-3

- Manage, monitor, and/or provide technical advice in the demolition and subsequent removal and disposal of buildings and structures contaminated with toxic elements, in consultation with ESF-10.

ESF-10

- Provide technical assistance to PR/USVI ESFs for environmental hazards affecting populations and responders for incidents;
- Assess hazardous materials locations in impacted areas that may threaten public and responder safety;
- Maintain PPE protocols, as needed, based on HAZMAT conditions;
- Continue operations based on initial assessments; and
- The EPA supports actions to stabilize the release, and prevent the spread of, contamination, including:
 - Sampling the drinking water supply in support of PR/USVI water providers,
 - Stabilizing any oil or HAZMAT release through the use of berms, dikes, or impoundments,
 - Capping of contaminated soils or sludge and use of chemicals and other materials to contain or retard the spread of the release or mitigate its effect,
 - Decontaminating buildings and structures,
 - Removing highly contaminated soils from drainage areas, and
 - Removing drums, barrels, tanks, or other bulk containers that contain oil or hazardous materials.

ESF-11

- Ensure regulated facilities are capable of providing safe meat, poultry, and processed egg products.
- Determine the need for animal carcass removal if carcasses are the result of an animal disease outbreak.
- If requested, continue to provide technical assistance to both ESF-3 (or ESF-10 contractors) and state partners regarding the proper disposal of animal carcasses.

Phase 3a – Short-Term Recovery

End State: Appropriate plans are in place for a smooth transition to local, commonwealth, and territorial officials for any remaining environmental response activities, and any needed Federal advice on continued protection of local, commonwealth, and territorial workers has been provided.

ESF-8

- Evaluate the need for longer term epidemiological follow-up and medical monitoring of response and recovery workers.

ESF-10

- Determine actions to prevent, minimize, or mitigate a release of HAZMAT and oil spills and develop a plan for environmental prioritization and cleanup;
- Continue environmental response/health and safety operations and ensure the correct PPE is selected and modified based on improving or deteriorating conditions; and
- Determine that skilled contracting labor force (e.g., environmental cleanup contractors, utility and infrastructure repair crews) has correct PPE for the conditions.

ESF-11

- Begin the transition to short-term recovery activities associated with stabilization of NCH resources and removal or control of contaminants.
- Monitor for any potential animal disease outbreaks as the result of either improper carcass disposal or secondary effects from the initial incident or cascading effects.

Tab 4 to Appendix 2: Fatality Management

Federal emergency operations will provide coordination and assistance to support local and state mortuary operations and provide fatality management services, including recovery of the deceased and temporary mortuary solutions, particularly those actions resulting from major flooding following hurricane impact.

Hurricane Fatality Management Objective: Make accurate assessment of fatalities in each incident and plan deployment of public and private resources to augment local medical examiners. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operations for Fatality Management

Currently, the Institute for Forensic Sciences (IFS) in PR is responsible for conducting mass fatality operations. PR Department of Health has advised that IFS has reported a threshold of 75 decedents in order for there to be a request for Federal mass fatality support.

Recent notable hurricanes:

- Hugo (1989): nine (9) deaths
- Marilyn (1995): two (2) deaths
- Hortense (1996): nineteen (19) deaths
- Georges (1998): between eight (8) and twelve (12) deaths (reports vary)

Fatality management in the US Virgin Islands is the responsibility of the US Virgin Islands Department of Justice. Historically, hurricanes have caused limited deaths (8 during Hurricane Marilyn).

Based on the above data, no or limited use of Disaster Mortuary Operations Response Team (DMORT) would be expected for a hurricane in Puerto Rico or the US Virgin Islands.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Federal fatality management plans have been developed and exercised, resources have been procured, and inventories have been updated.

ESF-5

- Develop fatality management centric pre-scripted mission assignments (PSMAs) with ESF-8

ESF-8

- Conduct pre-incident planning with local medical examiner (ME)/coroner(s) to address mortuary space and body recovery shortfalls;
- Develop and maintain plans for bereavement counseling with PR/USVI and community-based mental health NGOs;

- Coordinate Federal protocols to provide PR/USVI support for body recovery and victim identification;
- Conduct training and exercises with Region II ME agencies, Mass Care, and mental health providers; and
- Develop casualty reporting protocols with PR/USVI MEs.

Phase 1b – Elevated Threat

End State: Fatality management personnel are prepared and equipped for deployment.

ESF-5

- Notify ESF-8 of possible activation.
- Pull and review applicable ESF-8 PSMAs

ESF-8

- Maintain visibility of Regional Emergency Coordinator (REC) personnel and status.

Phase 1c – Credible Threat

End State: Fatality management caches have been readied for deployment and appropriate contact has been made with local, commonwealth, and territorial, officials. Staging of assets may occur.

ESF-5

- Activate ESF-8
- Request activation of National Disaster Medical System (NDMS)
- Determine need for Mobile Aeromedical Staging Facilities (MASF) and Disaster Aeromedical Staging Facilities (DASF)
- MA ESF-8 to pre-stage Disaster Mortuary Response Team(s) (DMORTs) at established ISBs/FSAs
- MA ESF-7 to pre-stage fatality management supplies (refrigerator trucks, etc.) at established ISBs/FSAs.

ESF-8

- Staff RRCC with RECs
- Identify REC availability and issue an immediate recall (consult on-call list and beyond as needed).
- Coordinate with other primary and supporting departments, agencies, and governments throughout the incident including sending Liaison Officers where appropriate.
- Coordinate/facilitate activation of NDMS
- Coordinate the alert and pre-staging of DMORT(s)

ESF-15

- Support a Joint Information Center (JIC) in the release of general public health response information to the public.

Phase 2a – Immediate Response

End State: Based on preliminary fatality estimates, Federal fatality management resource requirements have been identified and deployed.

ESF-5

- Coordinate with PR/USVI partners to obtain initial fatality impacts and local and commonwealth/territory capabilities.

ESF-7

- Coordinate with ESF-8 for initial assessment of additional fatality management supplies required and coordinate the acquisition of required commodities (refine and continue through all phases).

ESF-8

- Alert/notify, activate, and deploy Disaster Mortuary Operational Response Team (DMORT) to determine exact resources needed to support local ME/coroner;
- Alert/notify and activate DMORT personnel (disaster morgue personnel and Family Assistance Center Team) for deployment;
- Alert/notify the HHS Assistant Secretary for Preparedness and Response to prepare the Disaster Portable Morgue Unit (DPMU) for deployment; and
- Coordinate with mass care services on fatality management to develop support for family reunification for missing persons/remains (this does not include family notification, which is the responsibility of the impacted jurisdiction's ME or designated official).

ESF-9

- Coordinate with commonwealth, territorial, and local officials the location of fatalities (continue through all phases).
- Identify, map and report fatality locations (continue through all phases).

Phase 2b - Deployment

End State: Federal operations have been coordinated with the affected jurisdictions and fatality management resources are on site(s) and operational.

ESF-8:

- Implement plan to deploy public and private resources to augment local MEs;
- Deploy, employ, and maintain situational awareness on DMORT, DPMUs, and other medical assistance teams;
- Determine if additional resources are needed from contracted mortuary support services, including remains and body recovery;
- Develop coordination of family assistance with mass care services agencies, NGOs, or the private sector;
- Coordinate with PR/USVI governments to determine changes in capabilities and anticipated shortfalls; and
- Provide and coordinate information with Federal department and agency partners to maintain COP.

Phase 2c – Sustained Response

End State: Additional mortuary support resource and personnel requirements are identified and fulfilled to maintain a sustained response.

ESF-6:

- Establish a Family Assistance Center for family member interview(s) and assistance in victim identification.
- Provide crisis counseling assistance for family members.

ESF-7:

- Provide support for temporary internment, augmentation of refrigeration capacity, and decontamination for contaminated remains;
- Assess need for mortuary industry call to augment public sector support and coordinate with ESF-15.

ESF-8:

- Validate projection of the number of fatalities using appropriate modeling methodologies;
- Begin employment of DMORT personnel and assets;
- Maintain situational awareness and determine need to rotate mortuary teams to allow personnel to rest and maintain capability;
- Establish and maintain casualty tracking system;
- Coordinate additional Federal, PR/USVI, NGO, and private sector mental health care providers to provide bereavement counseling; and

Phase 3a – Short-Term Recovery

End State: Fatality management operations have transitioned to the identification of remains and the provision of counseling services to the bereaved.

ESF-8

- Retain body recovery and victim identification support to PR/USVI governments;
- Bereavement counseling; and
- Transition any family reunification locations to restored local ME agencies.

Tab 5 to Appendix 2: Infrastructure Systems

Critical Infrastructure and Key Resources (CIKR) are assets, systems, networks, and functions—physical or virtual—that are so vital to the United States that their incapacitation or destruction would have a debilitating impact on security, national economic security, public health or safety, or any combination of those matters. CIKR includes energy supply, transportation, communications/internet, water supply, and health care facilities.

Following a hurricane, coordination across all levels of government and the private sector will be instrumental in infrastructure systems. In particular, efforts should be focused on flood issues resulting from the hurricane, as this may cause damage to or storm water infiltration into the existing water distribution system as well as damage/inaccessibility of roadways. Transportation infrastructure is essential to life saving and sustaining activities. Preserving and restoring these systems is critical to providing potable water, maintaining wastewater and sanitation operations, and supporting firefighting and other emergency services. Utilities, like electricity and natural gas, may also experience distribution problems and could hamper response and recovery efforts.

Hurricane Infrastructure Systems Objective: Assess and prioritize CIKR damaged by incidents and coordinate public and private sector resources that will reduce the further loss of life and services. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operations for Infrastructure Systems

Electricity, potable water, and communications are essential to life and will be the focus of this section.

In Puerto Rico, electricity is provided by Puerto Rico Electric Power Authority (PREPA) primarily through petroleum. In 2012, 65% of Puerto Rico's electricity came from petroleum, 18% from natural gas, 16% from coal, and 1% from renewable energy. Water is also provided by PREPA through government owned reservoirs that collect fresh water from rainfall, rivers, and tributaries. PREPA is a public entity with a government appointed/elected board. A majority of Puerto Rico's power generation occurs along the southern coast, thus transmission lines run over mountainous terrain to reach the northern portion of the island making repair and restoration difficult and lengthy.

In the US Virgin Islands, electricity and water are provided by the government entity Water and Power Authority (WAPA) through petroleum and desalination plants, respectively. A majority of the population collect their own water from rainfall which is stored within cisterns on their property. Outages in both power and water supply occur sporadically as a part of island life.

It is important to note that the petroleum necessary to generate electricity and operate desalination plants is barged in from multiple sources. This makes returning shipping lanes (sea ports) a priority for response and recovery efforts.

Communication services are independently addressed in Appendix 4 of this Hurricane Annex.

Preparedness is critical before the threat of a tropical disturbance. The responsibility for ensuring infrastructure systems are prepared to handle a hurricane falls upon multiple agencies like the Department of Homeland Security, the Department of Energy, and the Environmental Protection Agency. Actions and activities include exercises, emergency operating plans, security and power assessments for generators. In phases 1b and 1c, it is FEMA's responsibility to share situational awareness with the private and public sector entities that maintain the infrastructure systems.

The primary Federal agency during Phase 2 is the US Army Corps of Engineers. The Corps provides power assessments for temporary power (as well as installing generators) and construction of temporary bridges and roadways. They are often assisted by the Department of Energy and the Department of Transportation. It is important to note that due to laws and regulations assistance is limited to facilitating restoration, not directly restoring or permanently repairing infrastructure. USACE can provide temporary power generation but they cannot fix transmission lines; fixing transmission lines is the responsibility of the owners. FEMA can mission assign the transportation of power crews to assist in restoration but the work of the power crews is under the authority of the companies they work for.

Temporary power will be provided where most needed first (usually at hospitals, police, fire, continuity of government facilities). Restoration of electricity begins with the ability to generate power, long-distance transmission, then into individual locations. Ultimately, the efforts of preparedness and response activities lead us to Phase 3 where recovery begins. It is here where FEMA's Public Assistance program can reimburse or provide technical assistance for the permanent repair of infrastructure systems.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Identification of vulnerable systems (especially those damaged in previous events) is completed;

ESF-5

- Develop new and/or revised Pre Scripted Mission Assignments (PSMAs) or Memorandum of Understanding (MOU) for ESFs, RSFs, and NGOs.
- DHS Protective Security Advisors determine pre-designated work location(s) from FEMA Region II based on anticipated incident;
- Coordinate update of CIKR data sets to be used by Region II during incidents and for modeling;
- Coordinate modeling inputs to assist Region II in making hazard-specific modeling to use during incidents; and
- Public Assistance (PA) Program Managers will provide steady state coordination, technical assistance, and training to state counterparts.
- PA Program Managers will review and approve State annual Disaster Administrative Plans.

Phase 1b – Elevated Threat

End State: Technical personnel and equipment have been identified and inventoried. Operational plans have been refined based on current information.

ESF-5

- *PA Program Managers:* Increase coordination with potentially impacted jurisdictions.
- *PA Program Managers:* Assist PR/USVI partners with EMAC agreements for infrastructure and/or emergency services (ex. Protective measure, technical assistance) as requested.
- Develop initial staffing rosters using ADD and FQS to support IMAT, PDA staff, RRCC, and IOF/JFO operations.
- Develop a potential list of what types of special assistance will be needed.

Phase 1c – Credible Threat

End State: Response actions and resources have been prioritized based on existing catalogues of pre-identified critical infrastructure. Predictive data/models should be consulted to ascertain the potential for damage to CIKR in the threatened area and staging of assets should occur to respond.

ESF-5 (*Public Assistance Program*)

- Provide support to RRCC, ESFs, and OFAs as appropriate through coordination with activated ESFs and OFAs.
- Finalize development of FQS staffing roster to be submitted to Mission Support for deployment. If RRCC is stood up, send staffing roster to the Staff Support Section.
- Increase the frequency of state PA coordination calls.
- If appropriate dispatch PA Program Manager to potentially impacted states if IMAT PA rep is overwhelmed.
- Participate in coordination calls with HQs.
- Analyze pre-storm models using FEMA and USACE modeling programs for potential support by FEMA and/or ESF partners.
- Coordinate with ESFs for anticipated support requirements.
- Field HQs request for regional surge funds for pre staging Joint Preliminary Damage Assessment Teams
- Support potential Emergency Declarations and provide support based upon state requests.
- Under EM declaration fulfill FCO PA requests
- Coordinate with USACE, DOT, Communications, and Department of Energy for RRCC/field staff augmentation.

ESF-1

- Deploy Federal Aviation Administration Liaison Officer to support Air Operations Branch.
- Determine staff available for rapid needs assessment strike teams and activate.

ESF-3

- Notify and deploy Power Planning Restoration Teams.
- Notify and deploy 249th Engineer Battalion
- Utilize Emergency Power Facility Assessment Tool database, and coordinate with ESF-1, ESF-2, ESF-8, ESF-10, and ESF-12 to determine if generator need and installation assessment of critical facilities has already been conducted.

ESF-5

- Activate ESFs 1, 2, 3, 6, 7, 8, 10, and 12
- Request the PSA personnel to support RRCC and for potential deployment with Incident Management Assessment Teams (IMATs) and pre-designated Federal Coordinating Officer (FCO).
- The Infrastructure Branch will coordinate with the Planning Support Section and Geographic Information Systems (GIS) to conduct initial modeling of incident and develop potentially impacted CIKR.
- The Infrastructure Branch will develop initial prioritized CIKR for assessment, and validate with ESF-1, ESF-2, ESF-3, ESF-10, ESF-12, and PSA staff upon arrival.
- Provide prioritized CIKR assessment list to the RRCC Planning Support Section and GIS.
- Coordinate with Defense Coordination Element and Other Federal Agencies (OFAs) for availability of aerial platforms for initial CIKR analysis and needs assessment strike teams.
- The Planning Support Section will coordinate with the National Response Coordination Center (NRCC) for the activation of the Interagency Remote Sensing Coordination Cell and provide the prioritized CIKR assessment list.
- In conjunction with RRCC Planning Support Section and PR/USVI partners, the Infrastructure Branch will develop a staffing, deployment, and information collection plan for the rapid needs assessment strike teams based upon aerial platform and staff availability.

ESF-6

- Develop an initial list of critical facilities such as shelter facilities and commercial kitchens for rapid needs assessment to support mass care.

ESF-7

- Based upon GIS modeled impacts, coordinate with NRSC for the ordering of generators.
- Coordinate with ESF-1, ESF-5, and DOD for identification of locations of staging areas and air operations facilities based upon available locations.
- Activate fuel contracts.
- Source, contract, or mission assign for water.
- Stage generators at ISBs

ESF-8

- Develop initial list of major medical facilities for rapid needs assessment and provide to Infrastructure Branch.

ESF-10

- Determine staff available for rapid needs assessment strike teams and activate

ESF-12

- Determine staff available for rapid needs assessment strike teams and activate.
- Establish and maintain contact with providers in PR/USVI.

ESF-13

- Determine staff available to providing additional site security to CIKR if requested by PR/USVI partners.

ESF-15

- Will provide public messaging throughout all phases regarding status of CIKR and efforts to stabilize and reestablish functionality, and public safety messages related to CIKR.

Phase 2a – Immediate Response

End State: Based on preliminary information about the incident’s impacts on critical infrastructure, immediate resource needs have been identified and coordinated across the public and private sectors. Response personnel have been deployed for assessments and additional assets are readied for deployment to affect repair and restoration.

ESF-1

- Coordinate with Air Operations Branch for use of aerial platforms (manned and un-manned) in conducting CIKR impact analysis immediately following an incident.

ESF-2

- Coordinate with private sector partners to determine communication outages and status of back-up resources (generators, fuel, etc.) and provide technical assistance as requested.

ESF-3

- Provide staff for rapid CIKR assessment
- Coordinate with PR/USVI partners for prioritized generator installation and cross-check against generator pre-screened facilities
- Coordinate with PR/USVI partners for CIKR debris clearance priorities

ESF-5

- Coordinate with ESF-1, ESF-2, ESF-3, ESF-10, ESF-12, and PSA staff for deployment of staff to execute CIKR rapid assessment plan.
- Coordinate with ESF-1 and ESF-13 for safe transportation of needs assessment personnel to either staging areas or air operations branch sites.
- Coordinate with PR/USVI partners to begin determining the re-entry standards/requirements for private sector facilities. Ensure the engagement of the ESF-15 private sector liaison.

ESF-7

- In conjunction with PR/USVI partners, provide fuel for first responders through a fuel contract or interagency agreement.
- In conjunction with PR/USVI partners, provide water for communities without water service via contracting or mission assignment.

ESF-8

- Regional Emergency Coordinators will coordinate with PR/USVI partners to determine status of major medical facilities.

ESF-10

- In coordination with rapid needs assessment strike teams, identify and prioritize HAZMAT CIKR sites for inspection.

ESF-12

- Conduct initial analysis of cascading effects for major power production or distribution system failures.
- Provide initial estimate of power outages and projected repair times to RRCC Planning Support Section and the National Response Coordination Center within four hours of the incident.

ESF-13

- Deploy requested staff to provide additional CIKR site security as requested.

Phase 2b - Deployment

End State: Operational plans have been updated and coordinated with the public and private sectors to stabilize and repair critical infrastructure. Resources are beginning to enter the area and perform stabilization actions.

ESF-3

- Coordinate installation of generators at prioritized sites that enable life-saving/life-sustaining activities.
- Conduct post-landfall infrastructure and public work assessments.
- Conduct Debris Management and Technical Assistance for removal and final disposal. (continue through all phases)

ESF-5

- Execute the rapid needs assessment plan in conjunction with ESF, OFA, and PR/USVI partners. As site assessments are reported, develop prioritized list of CIKR for rapid debris removal, stabilization, and restoration/repair, technical assistance, or priority monitoring (private sector facility) based upon immediate and cascading impacts.
- Coordinate with ESF-1, ESF-2, ESF-3, ESF-10, ESF-12, and PSA staff for restoration of public CIKR and maintain awareness of private CIKR stabilization/restoration efforts.
- Ensure tracking for restoration of essential community services (i.e. SWEAT-Sewer, Water, Electricity, and Transportation) in support of PR/USVI priorities is established (goal is within 72 hours of the declaration).

ESF-7

- Continue to stage and distribute resources from ISBs that are critical to stabilizing and restoring CIKR (continue through all phases).

ESF-8

- Regional Emergency Coordinators will coordinate with PR/USVI partners for prioritizing major medical CIKR in need of stabilization/restoration assistance.

ESF-10

- Develop prioritized HAZMAT CIKR for remediation and technical assistance.

ESF-13

- Continue to coordinate and provide site security presence at CIKR.

Phase 2c – Sustained Response

End State: Site surveys and damage assessments have been completed. In coordination with the private sector, activities to stabilize existing infrastructure, support facilities, and evacuation processing centers have been completed

ESF-3

- Install generators at CIKR sites as determined by PR/USVI partners and as rapid needs assessments are completed.

ESF-5

- In conjunction with ESF-1, ESF-2, ESF-3, ESF-10, ESF-12, PSA, Federal Disaster Recovery Coordinator, and Unified Coordination Group, begin developing long-term recovery plans.

ESF-7

- As demand decrease, deactivate commodity contracts, orders, or mission assignments.
- As able, consolidate ISB/FSA activities.

ESF-12

- Provide updated power outages and predicted restoration times.

Phase 3a – Short-Term Recovery

End State: Temporary repairs to critical infrastructure have been completed. Long-term repair and restoration of public and private sector projects have transitioned to Recovery.

ESF-3

- Participate in initial development of long-term recovery plan for public CIKR.

ESF-5

- Demobilize/transition RRCC ESF staff to JFO.
- Coordinate with NDRF staff for development of ESF/RSF transition plan.
- Conduct all kick off meetings and ensure mitigation participation at meetings (goal is within 21 days of approval of Request for Public Assistance).
- Inform applicants that they must identify and report all damage to FEMA within 60 days of kick off meeting.
- Implement PA Program through Stafford Act.
- Provide flood risk data to Individual Assistance (IA), National Processing Service Center (NPSC), and PA staff to assure risk considerations are weighed into decision-making process.

Tab 6 to Appendix 2: Mass Care / Emergency Services

Operations for this core capability following a tropical cyclone will be directed towards those populations requiring lifesaving and life sustaining mass care and emergency assistance support. Response and recovery plans should be inclusive of persons with disabilities (physical, sensory, cognitive, behavioral and/or chronic conditions), persons with access and functional needs (non-English speaking, limited English proficiency, persons in institutionalized settings, the elderly, children, persons from diverse cultures, and the transportation disadvantaged), service animals, and household pets as defined by the Pets Evacuation and Transportation Standards Act of 2005. Infrastructure damage following the storm may impact existing plans for shelter locations and ability to support them, reunification efforts, points of distribution locations and types of mass care and emergency service support required.

Hurricane Mass Care / Emergency Assistance Objective:

Deploy mass care services for up to 25 percent of the impacted population. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operations for Mass Care / Emergency Services

Mass Care response capability and procedures in the Caribbean are unique compared to the rest of the continental United States. Due to the distance from the rest of the United States, both Puerto Rico and the US Virgin Islands have increased logistical challenges to provide Mass Care support and are reliant on pre-landfall staging of assets and commodities to be able to immediately respond in a major or catastrophic event. Within the logistical challenges for the Caribbean is the turnaround time, or burn rate, of commodities and their timely request to continue support services to the impacted population.

The shelters in the Caribbean are designed primarily to provide Mass Care services for at risk populations. These individuals are often those with access and functional needs or live in isolated areas that are prone to flooding, mudslides, and landslides. The rest of the general population is known to shelter-in-place during a storm. Both Puerto Rico and the US Virgin Islands may request Federal assistance to support mass care services pre-landfall of a major hurricane. In addition to the at risk population requiring mass care services, the rest of the general population would most likely seek out assistance for commodities and shelter. It is anticipated that infrastructure of essential utilities will be out of service for extended periods of time.

Puerto Rico

In Puerto Rico, the commonwealth's agency responsible for Mass Care support is the Department of Housing, which coordinates that responsibility with 21 other commonwealth agencies and organizations. The Department of Housing is the lead agency in the management and administration of the shelter operations for the commonwealth. There is a pre-identified network of approximately 3-5 certified shelter facilities per each of the 78 municipalities, which

92% of these are public schools. The Commonwealth has a signed Memorandum of Agreement (MOA), for the full implementation of the FEMA National Shelter System (NSS).

Currently, the Commonwealth constituted a Household Pets Task Force which is led by the Department of Natural Resources. The Task Force is in the process of developing a framework that can assist the municipalities with operational strategies in support of household pets and service animals in disaster. Deployment of subject matter experts would be advisable to support this mission.

The Commonwealth is in the process of reconvening their Emergency Housing Task Force in order to focus on the development of an Emergency Housing Plan. The PR Department of Housing is the lead agency in this initiative and will be the entity implementing the emergency housing strategy.

The PR Department of Health is the lead agency for the Access and Functional Needs Task Force. An accomplished strategy performed by the Task Force is the development and implementation of the Access and Functional Needs Voluntarily Registry. The Registry was released to the public on October 2013 and they can register through the state's 311 system. The Registry was designed as a planning mechanism and to serve as an additional tool to support the need of the community.

US Virgin Islands

In the US Virgin Islands, the territorial agency responsible for Mass Care support is the Department of Human Services, and which coordinates that responsibility with 12 other territorial agencies and organizations. There is a pre-identified network ranging from 9-13 shelter facilities per island which are certified annually. The Territory has a signed Memorandum of Agreement (MOA), for the full implementation of the FEMA National Shelter System (NSS). However utilization of the NSS needs to be validated with the Department of Human Services since shelter operations are supported by the American Red Cross (ARC) therefore shelter information is uploaded into the ARC NSS.

The animal care providers in the Territory have a partnership with the Department of Agriculture to address animal control which can be built on to support household pets and service animals in disasters. However, an operational strategy needs to be developed to support household pets and service animals and it would be advisable to deploy subject matter experts to support this mission.

The Territory instituted an Emergency Housing Steering Committee to develop an Emergency Housing Plan. The Virgin Island Housing Finance Authority is tasked with the development and implementation of the Plan. Currently, the Plan is in a draft version and diverse temporary and long term housing options were reviewed. The draft and housing options are pending public and governmental vetting.

The Department of Human Services acknowledges that Functional Needs Population have many unique challenges. Although a Functional Needs Population Task Force is not configured, in

2006 the Department of Health in coordination with Human Services developed a database by island that identifies functional needs population which in case of a disaster will be requiring transportation assistance to evacuate.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Personnel have been trained, mass care plans have been developed and reviewed, and commodities and services and sources have been identified, and/or procured and inventoried.

ESF-6

- Participate in maintenance of the All-Hazard Plan and procedures.
- Conduct mass care and emergency assistance planning with stakeholders for 25 percent of an impacted population, their service animals and pets.
- Identify mass care human and material resource gaps based on information from stakeholders
- Establish Memorandums of Understanding, Memorandums of Agreement, blanket purchase agreements, contracts, and PSMAs.
- Maintain contact with PR/USVI governments and NGOs that supply mass care and emergency assistance subject matter expertise.
- Update jurisdictional Mass Care Support Services Plan.
- Annually review with States locations of shelters and provide data to GIS for coding.
- Participate in state plan reviews and development, work groups, and task forces.
- Develop public preparedness messaging.
- Determine existing logistics and resource capabilities.
- Identify procedures for the activation/request or need of the Mass Care Assessment Teams.
- Conduct training and exercises to validate existing plans.
- Validate NSS shelter and feeding commodities data.

Phase 1b – Elevated Threat

End State: Mass care plans, trainings, and exercises have been reviewed and updated to build, sustain, and improve existing operational capabilities.

ESF-6

- Mass Care Program Specialists and Voluntary Agency Liaisons (VAL) will conduct outreach to their counterparts in the potentially impacted areas in regard to sheltering, mass care and emergency services capabilities and preparedness activities.
- Participate in State and Voluntary Organizations Active in Disaster (VOAD) conference calls
- Coordinate with Resource Support Section (RSS) to identify additional NGO/OFA requirements for RRCC and possible IMAT support.
- Begin to engage coordination with ESF-8 for medically fragile population monitoring.
- Initiate communications with mass care service providers (ESF-8, HHS/Administration for Children and Families; ESF-11/USDA; American Red Cross, etc.) and Regional Disability Integration Specialist (RDIS) to discuss potential needs for support based on shared situational awareness (e.g., support for individuals with disabilities and others with access

and functional needs, children, human needs assessments, household pets and service animal support).

- Review historical data pertinent to the potentially affected area.
- Monitor shelter information, including:
 - Status (open, standby, impacted), location, type (e.g., pet-friendly, Americans with Disabilities Act-compliant, generator capability, cleared as structurally sound).
 - Operating agency (i.e., government-run, NGO, spontaneous).
 - Capabilities/capacities (e.g., number of sheltered/number of available spaces, ability to cook).
 - Requirements: additional staffing, equipment, supplies, food, hydration facilities, hygiene, sanitation, communications, and power.
 - Advanced support, including need for personal assistance services, durable medical goods, translators, interpreters, and security.
 - Identify sheltering arrangements that allow households pets within shelters or adjacent to shelter sites.
 - Communicate with, and give guidance to, ESF-15 stakeholders and FEMA's community partners to communicate to the affected population such things as:
 - Availability and location of mass care services, resources, and guidance, and
 - Instructions on what one should need/have/bring when evacuating and evacuation information, taking into consideration access and functional needs (including children, elders, transportation challenges, seniors, persons with limited English proficiency; people with cognitive and mobility disabilities; and household pets and service animals).
 - Provide information for population that would shelter in place, including boil water alerts, sanitation information, recommended hydration per day, etc.

Phase 1c – Credible Threat

End State: Identify anticipated mass care and housing support needs and resource requirements, in coordination with public, private, and nongovernmental partners.

ESF-6

- Coordinate Region II ESF-6 activities when RRCC is activated.
- Provide NRCC mass care desk with situational awareness.
- Request mass care support from ESF-8 and 11 as well as the American Red Cross.
- Request guidance from the Regional Disability Integration Specialist (RDIS).
- Develop Mass Care staffing plan and request appropriate resources
- Respond to activation of deployment of Mass Care with IMAT and/or other requests for Federal mass care services at PR/USVI Emergency Operations Centers (as appropriate).
- Participate in joint conference calls with stakeholders for situational assessment and awareness, including:
 - Responding NGOs (including the American Red Cross as the Mass Care co-lead),
 - IMAT and other Federal partners (e.g., USDA, HHS, DOD, EPA, USACE),
 - PR/USVI mass care services agencies (ESF-6 and -11 equivalents)
 - Disability agencies and organizations, and
 - Other NGOs and the private sector.

- Prioritize and coordinate mass care services and resources for congregate sheltering and potential shelter-in-place populations, prioritizing for survivors with mass care needs including, but not limited to:
 - Hydration and feeding
 - Consumable and durable medical goods
 - Baby food, formula, and supplies
 - Pet supplies such as food, leashes, and cages
- Assist survivors who may not have evacuated, including:
 - Coordinate with ESF-7 on additional capabilities to transport identified populations, support required pet evacuation, provide reception capabilities, and maintain tracking of evacuees
 - Coordinate transportation to pre-identified shelters and warming/cooling centers, and
 - Refer to ESF-8 if emergency medical needs are required
- Coordinate shelter operations support
- Begin reporting shelter numbers into the National Shelter System (NSS) to identify trends in shelter population fluctuations, shelter openings, shelter closings, and State governments anticipating future resource needs
- Coordinate with VOAD members and other mass care service providers to identify available inventory of mass care resources and fill any shortfalls

ESF-7

- Provide resource support for mass care services as requested by the state.
- Coordinate with VOAD members and other mass care service providers to identify available inventory of mass care resources and fill any shortfalls.

ESF-15

- Provide public messaging to survivors on disaster related information (evacuation routes, shelter locations, etc.).

Phase 2a – Immediate Response

End State: Based on preliminary situational reports, Federal personnel and resources have been activated to support evacuation and mass care requirements, in close coordination with whole community partners

ESF-3

- Execution of support contracts to provide potable water and emergency power (if required).

ESF-6

- Participate in conference calls with mass care stakeholders for situational awareness
- Participate in mass care and emergency assistance state-led task forces
- Determine operational priorities and goals to support mass care and emergency services
- Determine areas impacted
- Identify shelter-in-place locations, populations, and needs, including persons with disabilities and people with access and functional needs
- Convene Congregate Care Coordination Unit (CCCU) to support analysis of congregate care facilities
- Establish priorities for Mass Care support and/or operations

- Coordinate ongoing mass care services with all parties providing mass care support (such as voluntary agencies, faith-based organizations, community-based organizations, and Voluntary Organizations Active in Disasters) regarding the impacted populations, prioritizing for survivors with acute mass care needs.
- If appropriate request and deploy medical resources to secure health and medical support at shelters and other mass care facilities as requested by the state
- Support applicable planning for the next operational phase(s), including:
 - Number of meals capable of being produced and manner of distribution
 - Identify the ability to provide hydration to impacted populations
 - Identify need for bulk distribution items and develop plan for accomplishing task
 - Analyze locations of impacted individuals who have either congregated in one area or have sheltered in place, and develop plan to provide mass care
 - Determine the burn rates for each of the resources and acquisition timeline
- Coordinate with ESF 7 the delivery of shelter and emergency supplies to staging areas in an effort to support shelters, PODs and shelter in place population.
- Identify the reunification plan being utilized and provide information on available federal resources to support this.
- Continue reporting shelter numbers into the National Shelter System (NSS) to identify trends in shelter population fluctuations, shelter openings, shelter closings, and State governments anticipating future resource needs.
- Continue to monitor and assess Mass Care needs and resource requirements
- Develop planning metrics for 3, 5, 7 days out that will outline human and material resource requirements.

Phase 2b - Deployment

End State: In coordination with the affected jurisdictions, Federal mass care support resources and personnel requirements are prioritized, and deployed/sustained to support the affected area.

ESF-6

- Validate staffing pattern identified during phase 1C and request additional resources as necessary
- Activate and deploy mass care assessment teams and mass care personnel (including contractors and other support personnel)
- If requested, mobilize mass evacuation support staff, including food, hydration, information, and reunification, as well as assist with tracking the movement of evacuees, household pets, luggage, and durable medical equipment through deployment of the National Mass Evacuation Tracking Systems (NMETS)
- Manage/provide support for unsolicited donations and unaffiliated volunteers
- Evaluate the feasibility of non-traditional sheltering methods (e.g., private sector solutions, soft-sided shelters, small-sized portable/collapsible shelters)
- Provide public messaging to survivors on disaster related information (reunification, additional shelter locations, voluntary agency assistance, etc.)
- Initiate Preliminary Damage Assessments (PDAs), if required
- Implement Individual Assistance and Human Services programs, if required

ESF-15

- Provide public messaging to survivors on disaster related information (reunification, shelter locations, voluntary agency assistance, etc.).

Phase 2c – Sustained Response

End State: Additional Federal resources have been delivered to the affected area. Life-sustaining services have been provided in close coordination with whole community partners. Eligible survivors have begun to receive relocation assistance or interim housing. Reunification services have been provided to reunite the missing with family members and caregivers.

ESF-1

- Coordinating routing of life-saving/sustaining resources being pushed into areas where survivors are sheltering in place.

ESF-3

- Provide technical support to IA-Technical Assistance Contract (TAC) and ESF-6 on housing planning and strategies.
- Implement Blue Roof Mission to include ACI contracts (as required).

ESF-6

- Push and coordinate requested resources through the government and NGOs to those affected populations that need acute mass care resource support.
- Ensure the continued delivery of emergency relief supplies to shelters and PODs to support congregate care as well as shelter-in-place population.
- Coordinate with the RDIS and DSA to identify impacted persons with disabilities and access and functional needs that have not been addressed.
- Coordinate with Logistics to implement sanitation assistance for shelters, mass collection points, and evacuation points.
- Identify additional members of a multiagency CCCU and begin deployment; the unit performs the following subtasks:
 - Monitor delivery of mass care services and ensure needs of all survivors are being met, including persons with functional/access needs and people with household pets and/or service animals,
 - Identify unmet needs in shelters,
 - Identify needs of persons who have sheltered in place voluntarily or involuntarily and the needs of underserved populations or isolated areas,
 - Review findings of these teams and resolve issues, and
 - Provide/coordinate needed resources to appropriate agencies.
- Coordinate support to PR/USVI ESF-6 agencies and NGOs with increased capacity to produce hot meals when operationally practical.
- Coordinate and calculate logistical support with ESF-7 for feeding by factoring in two shelf-stable meals per day and hydration (hydration should be calculated at four liters per person per day).
- Refer patients with acute health and mental needs to appropriate PR/USVI service providers.
- Support NGO mobile feeding capabilities to meet mass care services objective.
- Monitor the need for federal support for the delivery of emergency relief supplies to shelters, PODS, and shelter-in place population.

- Continue to supply mass care and emergency assistance data to relevant stakeholders.
- Maintain sheltering/NSS reporting schedule.
- Coordinate hydration, meals, mental health counseling, and family reunification support to survivors while they are awaiting notification of missing or dead, as requested by the Fatality Management Services Capability Group.
- Deploy additional resources to the field or reposition current resources based on a shared situational awareness and the status of completed objectives.

ESF-7

- Deploy additional resources to the field or reposition current resources based on a shared situational awareness and the status of completed objectives.

Phase 3a – Short-Term Recovery

End State: Non-congregate housing alternatives have been identified to facilitate the transition of survivors from congregate shelter. Relocation assistance and/or interim housing solutions have been provided to applicable recipients. Mass care activities have transitioned to support the longer-term needs of survivors, and demobilization of Federal resources has begun.

ESF-6

- Continue to report meals delivered, meals served, snacks served and feeding plans (fixed and mobile)
- Continue to report state supplied shelter numbers
- Adjust feeding operations to include increased mobile or fixed feeding sites based on analysis of shelter populations that remain overnight and those that visit for feeding only;
- Coordinate access to emergency assistance for survivors in shelters, those who have sheltered in place, and those without transportation;
- Identify additional needs that can be met by mass care/emergency assistance services, including:
 - Health and mental health support,
 - Spiritual care,
 - Provision of ongoing hygiene needs, including laundry and clothing, and
 - Support planning for, and coordination of, resources to meet these needs
- Support recovery planning, including re-entry planning for survivors in shelters and/or without transportation;
- Ensure re-entry is supported by household distribution of food, the Disaster Supplemental Nutrition Assistance Program, mobile feeding, and bulk distribution of relief supplies;
- Coordinate public outreach with ESF-15, updating impacted areas on availability of mass care services;
- Work with impacted governments to determine any mass care items they anticipate requesting from FEMA to provide support to Points of Distribution; and
- Coordinate planning regarding mass care support to Disaster Recovery Centers, Family Assistance Centers, etc.
- Consolidate task forces and staffing to reflect decreased delivery of mass care and emergency assistance activities

ESF-15

- Provide public messaging related to available disaster assistance (i.e. FEMA 800 number).

Tab 7 to Appendix 2: Mass Search and Rescue Operations

Federal search and rescue resources may be deployed to the affected areas to augment the local, commonwealth, territorial resources in the affected area and perform operations to save lives in flooded and damaged areas.

Hurricane Mass Search and Rescue Operations Objective: Prior to landfall, stage anticipated required resources and personnel at the incident support base or facility as requested by PR/USVI. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones)

Concept of Operations for Mass Search and Rescue

Search and rescue a commonly thought of core capability that both Puerto Rico and the US Virgin Islands is keenly aware of. Puerto Rico has a Search and Rescue Task Force that is trained to FEMA standards, although not part of the national system. The US Virgin Islands has a small, but robust volunteer team.

National procedure indicates that an Incident Support Team and three unique task forces are on stand-by; this configuration remains on-call for deployment within a short time frame. Logistical challenges exist when deploying to the Caribbean. Assets must be delivered via airframe. Maritime search and rescue is under the authority of the US Coast Guard and will be coordinated out of Sector San Juan.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Local, regional, and national Search and Rescue (SAR) personnel are inventoried and trained.

ESF-9

- Conduct SAR training;
- Maintain SAR equipment and supplies in a ready posture;
- Validate with PR/USVI governments the availability of specialized SAR teams (e.g., water rescue, cave rescue, etc.); and
- Maintain call-down lists for these SAR teams.

Phase 1b – Elevated Threat

End State: Personnel have been placed on stand-by (issued a Warning Order). Potential locations are identified.

ESF-5

- Establish and maintain situational awareness and a common operating picture.

Phase 1c – Credible Threat

End State: Personnel and resources have been identified and deployed to staging areas.

ESF-1

- Identify temporary alternative transportation solutions that can be implemented by others when systems or infrastructure are damaged, unavailable, or overwhelmed.
- Perform activities conducted under the direct authority of Department of Transportation elements as they relate to aviation, maritime, surface, railroad, and transportation to assist in the deployment of the mass search and rescue assets, including movement within the areas of operations.

ESF-3

- Be prepared to support National Urban Search and Rescue teams as necessary (including structural assessment teams, damage assessments, and advisors to local jurisdictions and other Federal agencies.)

ESF-5

- Coordinate and execute mission assignments for Logistics Management and Resource Support and other Federal resources required by SAR to support field operations;
- Coordinate through the FEMA Movement Coordination Center for transportation of personnel and equipment;
- Coordinate, request, and employ structural, sea, or air-based teams to accomplish the mission through Urban Search and Rescue (US&R);
- Coordinate the staging of resources.

ESF-7

- Provide logistical support to Urban Search and Rescue elements (continue through all phases).

ESF-9

- Obtain and maintain a COP and situational awareness;
- Headquarters US&R Program Office assigns US&R liaison officer to RRCC;
- Employ the Regional SAR group (e.g., USCG, Department of Defense [DOD], CBP, Department of Transportation, Federal Aviation Administration) to interface with the Federal SAR Coordination Group (Department of the Interior, DOD, USCG, FEMA), the impacted State(s) or territorial ESF-9, and air branch to determine which agency has the best capability to meet requirements;
- Activate and stage one or more US&R Incident Support Team (IST) to each affected jurisdiction;
- Activate U.S. Army Corps of Engineers (USACE) structural specialist support for US&R task forces for deployment to, and employment in, the affected area;

Phase 2a – Immediate Response

End State: Personnel and resources have been deployed to the impacted area. Coordinated SAR operations have begun.

ESF-1

- Monitor and report status of and damage to the transportation system and infrastructure as a result of the incident.

ESF-3

- Provide structural engineering expertise in support of search and rescue efforts to ensure the safety of responders and/or survivors.
- Assist with debris removal to allow US&R teams to gain access to survivors trapped within collapsed structures.

ESF-5

- Monitor ESF-9 progress and coordinate with NRCC for additional resources.
- Integrate the ISTs into or establish ESF-9 under the Operations Section, Emergency Services Branch.

ESF-9

- Employ one or more US&R Incident Support Team (IST) to each affected jurisdiction from the Staging area.
- Initiate airborne SAR within four hours following the tropical cyclone.
- Designate Federal staging bases with ESF-7 for structural US&R task forces in proximity to impacted areas and deploy the US&R structural teams to staging areas.
- Coordinate the mission assignment of other Federal SAR resources.
- Coordinate with the Defense Coordinating Element the deployment of DOD SAR assets.
- Assess on-scene security needs for deploying teams and coordinate requirements with the On-Scene Security and Protection Capability Group/ESF-13.
- Maintain situational awareness of FEMA US&R resources and other mission-assigned or mutual aid SAR resources.
- Identify self-deployed Federal air and sea SAR assets and begin coordination of assignments for next operational period.

Phase 2b - Deployment

End State: Additional Federal personnel and resources have been deployed to conduct community- based search and rescue operations, supplementing existing regional and national teams.

ESF-8

- Coordinate with the Incident Commander and the assigned Incident Management Assistance Team to move the rescued and/or injured.
- Respond to medical needs associated with physical and mental health, behavioral health, and substance abuse of both incident survivors and response workers.

ESF-9

- Support PR/USVI requests for additional search and rescue resources.
- Continue to evaluate incident objectives, assess priorities, and determine what additional resources will be required.
- Continue employment in accordance with Incident Command and UCG priorities and instructions (continue through all response phases).
- ISTs and TFs implement plans for internal sustainment.
- ISTs plan and coordinate the rotation of the teams, if necessary.
- USCG continues maritime SAR, as necessary.
- DOD and/or NPS continue land SAR operations, as necessary.
- Establish a coordination group with PR/USVI SAR, law enforcement, and firefighting to include ESF-3, 4, 7, 9, and 13 to identify available CERT groups and personnel to receive “just-in-time training” for low risk search and rescue operations.

Phase 2c – Sustained Response

End State: Final SAR operations have been conducted, utilizing surge capacity, as needed.

ESF-9

- Conduct SAR operations and address any shortfalls;
- Assess team status and rotate US&R teams and other SAR resources to allow personnel to rest and maintain capability;
- Assess initial deployment and determine if additional resources are necessary.

Phase 3a – Short-Term Recovery

End State: SAR operations have concluded and remaining activities are transitioned to recovery operations.

ESF-9

- Demobilize assets based on IST analysis of objectives achieved and reposition or demobilize personnel when appropriate.

Tab 8 to Appendix 2: On-Scene Security and Protection

Federal responders supporting local, commonwealth, and territorial safety and security resources within the impacted area may be utilized to perform operations to save lives in flooded and tropical cyclone damaged areas. Overall, it is accomplished through the coordinated delivery of: general law enforcement assistance through the provision of additional officers, traffic and crowd control, site security, and access control to specific sites and/or facilities. A safe and secure environment is essential.

Hurricane Mass Search and Rescue Operations Objective: Prior to landfall, stage anticipated required resources and personnel at the incident support base or facility as requested by PR/USVI. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for On-Scene Security and Protection

Historically, requests for Federal law enforcement support have been requested in both jurisdictions after catastrophic hurricanes. The Department of Justice is the lead for Emergency Support Function 13 and will use, as needed, any Federal partner capable of providing law enforcement services. While there is no anticipated challenge with providing Federal law enforcement in Puerto Rico, there is legislation prohibiting Federal law enforcement officers from performing local law enforcement activities in the US Virgin Islands. The US Department of Justice is currently working with US Virgin Islands legislators in resolving this issue.

Phase 1 activity is limited to monitoring and preparedness actions. In Phase 2 there will be limited deployment of Federal law enforcement personnel to provide force protection to federal responders. There is a potential for Phase 3 utilization of Federal law enforcement personnel in both jurisdictions. The situations should be constantly monitored to be proactive in deployments.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Plans, checklists, interagency agreements, and contracts have been reviewed and revised as necessary; private sector partners have been integrated into teleconferences and planning meetings.

ESF-5

- In coordination with PR/USVI partners and ESF-13 representatives, develop Public Safety and Security focused PSMAs and participate/initiate exercises.

ESF-13

- Validate Emergency Management Assistance Compact (EMAC) agreements between Puerto Rico and the US Virgin Islands and determine if Federal support is required to facilitate agreements (e.g., critical transportation of assets);
- Coordinate with ESF-13 primary and support agency workshops with PR/USVI law enforcement agencies to determine likely on-scene security and protection needs during a catastrophic hurricane;
- Conduct recurring training and exercises with personnel; and
- Maintain equipment.

Phase 1b – Elevated Threat

End State: Select resources have been pre-positioned, and updates on commodities, facility status, personnel, and other FEMA and partner assets have been provided to deliver shared situational awareness.

ESF-5

- Coordinate with and alert RELC, ESF-13 representative, and/or Field Coordinators for possible RRCC staffing.

Phase 1c – Credible Threat

End State: Assets have been positioned, as appropriate, through coordination with local, commonwealth, and territorial jurisdictions with, the private sector; and other stakeholders. Real-time information is utilized to prepare an enforcement plan.

ESF-1

- Initiate deployment of Transportation Security Forward Team (Transportation Security Officers) if required by the Transportation Security Advance Team.

ESF-5

- Activate ESF-13
- Coordinate the provision of security for field operational structures (i.e. Joint Field Offices, Incident Support Bases) and deployed FEMA assets.
- Develop operational objectives for coordination of Federal law enforcement resources (continue through all phases).

ESF-7

- Coordinate logistical requirements to support field operations.
- Request security assets to safeguard infrastructure and commodities.

ESF-13:

- Assess security and protection situation in impacted areas and provide input to initial COP;
- Communicate with the IMAT(s) and impacted agencies to determine law enforcement support requirements; assess any jurisdictional restrictions on deployment or deputization of Federal law enforcement officers (LEO) for augmentation of law enforcement;

- Inventory Pre-Scripted Mission Assignments (PSMA) and determine which are applicable to the tropical cyclone to begin deployment to impacted governments requesting public safety and security support;
- Request initial situational awareness on the status of transportation portals, including status of airports from the Transportation Security Administration (including capability for screening operations and airport security) and status of ports from the USCG and U.S. Customs and Border Protection (CBP);
- Coordinate anticipated protection requirements of deploying Federal assets (teams and equipment) and develop deployment plan to meet timelines and logistics;
- Coordinate incident-specific briefings from requesting jurisdictions for deployed personnel for security or fire service missions, including legal authorities, logistics, accountability, billeting, and intelligence from the scene;
- FPS provides ESF-13 lead with anticipated protective services needed for Federal facilities in impacted area that may require augmentation with FPS or contracted security personnel; and
- Develop MAs needed to meet any shortfalls in PSMA.

ESF-15

- Coordinate and provide public messaging on movement restrictions and curfews to keep the public informed and provide crowd control.

Phase 2a – Immediate Response

End State: Information has been analyzed regarding the operational environment to gauge response needs. Assets can begin moving into the area.

ESF-2

- Coordinate Federal actions to assist industry in stabilizing and re-establishing the public communications infrastructure thereby allowing alerts, which will facilitate the dissemination of instructions relative to the delivery of on-scene security and protection information to the public.

ESF-4

- Assess fire services requirements from damage assessment and information collection links and develop deployment plan to meet PR/USVI fire services assistance requests; and
- Mobilize fire services responders through ESF-4, including logistics requirements and preparation of MAs required for deployment.
- ESF-4/U.S. Department of Agriculture (USDA)/U.S. Forest Service coordinate logistics support through the National Interagency Fire Center/National Interagency Coordination Center (NICC) and the Geographic Area Coordination Center(s) to mobilize additional firefighting resources;

ESF-8

- Provide counseling and stress debriefing, ensure chain of custody of evidence, and fingerprint the remains to identify fatalities.

ESF-13

- Coordinate with ESF-10 to identify extent of oil and HAZMAT contamination or HAZMAT sites that may impact operations or may degrade and require response support;
- Prioritize transit of LEOs and resources requested by PR/USVI governments with ESF-7;
- Deploy assessment teams to coordinate with impacted PR/USVI governments, assess law enforcement capabilities, and provide situational awareness for determining operations objectives driven by the consequences of the incident(s);
- Ensure security of assets once they arrive in impacted areas.

Phase 2b - Deployment

End State: Governmental, NGO, and private sector resources have been mobilized to support immediate lifesaving and life-sustaining needs, and stabilize the incident.

ESF-13

- Determine if additional resources are needed or if current resources should be redeployed to other areas or demobilized.
- Continue to augment resources and capabilities for Federal operations.
- Continue to augment resources and capabilities for PR/USVI and local authorities (as requested).
- Rotate out Federal law enforcement resources that have been operating for the duration of the disaster to minimize fatigue and maintain capabilities.

Phase 2c – Sustained Response

End State: Federal assistance, including coordination with NGO, private sector, and international entities, has been incorporated into response operations. Begin to transition services still needed via mission assignment to other means (contract, inter-agency agreement, etc.)

ESF-5

- Request protective services from ESF-13 to secure critical infrastructure in coordination with NICC.

ESF-13

- Consider deputizing LEOs through the appropriate legal authority or EMAC to ensure proper jurisdictional authority to enforce PR/USVI and local laws.

Phase 3a – Short-Term Recovery

End State: Responsibility for supply chain and location security has started to shift to the local, commonwealth, and territorial jurisdictions; field security concerns have lessened or are non-existent.

ESF-13:

- Review ongoing MAs supporting law enforcement agencies;
- Continue security and protection operations for Federal assets, as needed;
- Coordinate demobilization timelines with Federal asset managers and demobilize security personnel, as needed; and
- Review contracted security options to protect Federal recovery facilities.

Appendix 3: Operational Support

Operations to provide essential public and private services and resources to the affected population through coordination of effort will occur both pre- and post-impact, and will focus on lifesaving and life-sustaining services. The Public and Private Services and Resources core capability will begin to pre-stage resources depending on the projected landfall of the tropical cyclone.

Hurricane Operational Support Objective: Re-establish the public and private sector supply chain(s) that restores the population's access to prioritized goods and services. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operational Support

The private sector is very resilient in the Caribbean due to the environment of being so isolated. Supply chain, infrastructure constraints, and fluctuating economy present challenges that have created a well-prepared business community. Continuity of operations training has been provided on numerous occasions to both Puerto Rico and the US Virgin Islands businesses. FEMA Region II coordinates with private sectors partners through the Private Sector Liaison as well as through the same Headquarters program area. PREMA retains a private sector liaison at their EOC to share situational awareness with members of the business community.

The best practice for engaging with Public and Private Services and Resources is to maintain relationships throughout the response and recovery phases. This ensures the rapid economic restoration and return of normal operations in the area. Whenever possible, representatives should be invited to briefings, distribution lists, etc. to maintain common operating picture.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Plans, checklists, interagency agreements, and contracts have been reviewed and revised as necessary; private sector partners have been integrated into teleconferences and planning meetings.

ESF-5

- Conduct recurring training and exercises with personnel;
- Conduct capability assessments with vital private sector industries/providers (e.g., Wal-Mart, K-Mart, Pueblo, PUMA, Shell);
- Determine requirements needed for restoration of vital private sector industries/providers;
- Develop communication methodologies to establish pre- and post-incident communications networks; and
- Identify anticipated PR/USVI needs that could be supported via the private sector.

ESF-15

- Develop a private sector information sharing portal on the Homeland Security Information Network (HSIN) and provide internal and external HSIN training; potentially training for WebEOC as well.

Phase 1b – Elevated Threat

End State: Select resources have been pre-positioned, and updates on commodities, facility status, personnel, and other FEMA and partner assets have been provided to deliver shared situational awareness.

ESF-15

- Activate Private Sector Liaison and hold coordination calls, if not already activated.
- Assess possibility of staging assets and personnel for restoration purposes pre-landfall.

Phase 1c – Credible Threat

End State: Assets have been positioned, as appropriate, through coordination with PR/USVI; the private sector; and other stakeholders. Situational awareness has been attained to effectively coordinate the delivery of equipment, supplies, and services. Information on private sector recovery strategies and priorities has been distributed.

ESF-1

- Provide variable messaging signs (e.g., electronic billboards, portable light boards, loudspeakers on trucks).

ESF-3

- Execute emergency contracting support for lifesaving and life-sustaining services, to include providing potable water, emergency power, and other emergency commodities and services.

ESF-4

- Alert and activate Federal firefighting resources.
- Provide direct liaison with PREMA and VITEMA EOCs, local EOCs, and fire chiefs in the impacted area and coordinate requests for firefighting assistance in structural or industrial fire detection, protection, and suppression operations.

ESF-5

- Coordinate with Federal, PR/USVI, and private sector partners to determine support needed, priorities, and their capabilities;
- Prioritize restoration of energy to life-saving facilities;
- Assess support needed for key private sector distribution centers to restore commercial food and commodities to the impacted areas; and
- Provide initial guidance for Public Assistance (PA)-related issues and identify critical water, power, and fuel needs post-incident.

ESF-6

- Analyze projected population impacts to determine hydration, feeding, and sheltering requirements in the forecasted impact areas.

- Assess the need for, and coordinate the provision of, life-sustaining ESF-6 services, resources and supplies from government agencies, nongovernment organizations (NGOs), and the private sector.
- Provide subject matter expertise to identify resource requirements to meet the life sustaining needs of disaster survivors, including those with access and functional needs, and their household pets and service animals.

ESF-7

- Develop shared situational awareness through coordination with local, commonwealth, and territorial jurisdictions, the private sector, and other stakeholders to identify additional resource shortfalls.
- Coordinate the delivery of teams, equipment, supplies, and other services to ISBs, staging areas, PODs
- Determine requirements for supply of fuel, power generation, and sanitation services to support ISBs, or staging areas, and deployed resources.
- Coordinate the purchase and direct distribution of Infant & Toddler Kits, Durable Medical Equipment, and Consumable Medical Supply Kits.
- Coordinate with OFAs for the activation of individual authorities, statutes, or the implementation of transportation weight, time, and toll waivers.
- Coordinate with the FEMA Private Sector Liaison regarding public information and outreach with regional private sector stakeholders, associations, academia, and nongovernmental organizations.
- Activate support from other interagency partners such as the Department of Defense (DOD) airlift/sealift, DLA commodities and fuel, and USACE resources, as required.
- Coordinate the provision of logistics resources of the impacted area, and Federal entities, private sector, and NGOs by providing comprehensive logistics planning, management, and sustainment resources and capabilities.

ESF-11

- Coordinate with ESF-6 and states on requests for disaster food assistance.
- Support ESF-6 to coordinate an integrated Federal response with the public and private sector to meet the mass care and emergency assistance needs.

ESF-12

- Through coordination with the Department of Energy, serve as a Federal point of contact with the energy industry for information sharing and requests for assistance from private and public-sector owners and operators.
- Provide situational awareness input on power outages and repair timelines;

Phase 2a – Immediate Response

End State: Information has been analyzed regarding the operational environment to gauge preliminary planning and response needs.

ESF-1

- Coordinate and support response and recovery activities among transportation stakeholders.

ESF-2

- Coordinate Federal actions to assist the public and private industry in restoring the critical communication infrastructure.

ESF-3

- Coordinate with RRCC/JFO for potential requests for debris removal missions.

ESF-4

- Obtain an initial fire situational and damage assessment through established intelligence procedures.
- Coordinate deployment of Federal firefighting resources.
- Provide firefighting subject-matter expertise as needed to support PR/USVI and other Federal partners.
- Provide and coordinate firefighting assistance to other Federal land management, commonwealth, territorial, and local fire organizations as requested under the terms of existing agreements.

ESF-7

- Coordinate with General Services Administration to source, identify, evaluate, and acquire a lease for Americans with Disability Act-compliant space for JFOs, and other field operations within 72 hours following notification of requirement.

ESF-8

- Notify and prepare for shipment of fatality management resources to the impacted area.

ESF-12

- Coordinate for the restoration of energy during response and recovery operations. (continue through all phases)
- Provide subject-matter expertise to the private sector as requested, to assist in restoration efforts. (continue through all phases)

Phase 2b - Deployment

End State: Governmental, nongovernmental, and private sector resources have been mobilized to support immediate lifesaving and life-sustaining needs, and stabilize the incident.

ESF-4

- Obtain, maintain, and provide firefighting incident situation and damage assessment information.
- Coordinate with state, local, and tribal responders to identify additional incident firefighting resource needs and determine issues regarding resource shortages and resource ordering

ESF-7

- Maintain shared situational awareness to determine shortfalls and additional resource requirements. Inventory and identify (to ESF-7) all large-space facilities/structures within

250 miles of the incident venue(s) that could be made available as temporary shelters, temporary morgues, or to support mass casualty medical operations.

- Collaborate with ESF-1, 3, 6, 8, 11, and 12 to ensure the continued delivery of emergency relief supplies to shelters, PODs, and dispersed/shelter- in-place populations.

ESF-8

- Coordinate with funeral homes/funeral directors for the handling of remains.
- Coordinate the use of public/private facilities for alternate healthcare treatment sites.

ESF-11

- Collaborate with ESF-8 to ensure the safety, security, and defense of Federally-regulated foods, and the health, safety, and security of food-producing animals and veterinary biologics.

Phase 2c – Sustained Response

End State: Federal assistance, including coordination with nongovernmental, private sector, and international entities, has been incorporated into response operations.

ESF-7

- Coordinate demobilization of unneeded resources, supplies, services, and personnel.

ESF-11

- Coordinate Natural and Cultural Resources and Historic Properties identification and vulnerability assessments.

Phase 3a – Short-Term Recovery

End State: Responsibility for incident management has shifted to the local and PR/USVI jurisdictions.

ESF-3

- Coordinate with Region II PA for the implementation and management of the FEMA Public Assistance Program and other recovery programs.

ESF-7

- Demobilize selected ESF-7 response efforts as the appropriate Recovery Support Functions (RSFs) continue to mobilize.
- Selected ESF-7 support actions include
 - Coordinate the rental or lease agreements for disaster recovery centers (DRCs)

Tab 1 to Appendix 3: Critical Transportation

Highways, airports, and seaports are essential to sustaining the population of the affected area. Federal resources can coordinate and facilitate the evacuation from the affected area, evaluate damages from the tropical cyclone, and provide assistance in expediting repairs. Transportation infrastructure will likely be affected by wind damage and flooding.

Hurricane Critical Transportation Objective: Determine the most appropriate transportation services that facilitate the response and support survivor needs within two operational periods. (Note this is the same objective as the one in the All Hazards Plan.)

Concept of Operations of Critical Transportation

Unlike any other core capability, all others are dependent on critical transportation in the Caribbean.

Maintain relationships with transportation providers, both private industry and Federal partners, in order that operations run efficiently during all phases. FEMA Region II will rely heavily on the US Department of Defense for transportation capability, including air and sea frames, assessments, and possible air traffic control. The most important aspect of critical transportation is the effective use of limited air and maritime transportation “bridges” in and out of the affected areas. Time-phased deployment of resources is necessary to save lives and protect property during response operations. This timing of resources is shared through the existing relationships before the need arises.

During Phase 2, certain nodes of transportation will need to be increased while others will be terminated to allow controlled, priority access to first responders and life-saving resources to enter and operate within the affected area. Assets being deployed post-landfall will utilize air transportation. Priority is given to live-saving resources. Consequently, at the same time, additional resources will utilize maritime transportation to bring about sustained operations (life-sustaining and recovery). Assessments reports from PREMA/VITEMA will be needed to establish viable transportation routes within the islands. The main concerns from reporting include roads blocked by debris and damaged bridges/roadways.

Longer term activities to restore critical transportation include, but are not limited to: assessment teams, temporary bridges, temporary ports, and landing areas. Responsibility for critical transportation infrastructure resides across PR/USVI and Federal governments. Where eligible, FEMA Public Assistance will reimburse PR/USVI for permanent work.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Plans have been reviewed, updated, and exercised and coordination has occurred between local, commonwealth, territorial, and Federal governments as well as with voluntary and private-sector representatives.

ESF-5

- Review debris clearance plans for jurisdictions and clarify any required technical assistance;
- Review critical transportation needs for Federal response plans and coordinate and pre-select Federal resources that can meet specific timelines (e.g., airlift of search and rescue [SAR] or mobilization of mass care services).
- Review Points of Distribution, sheltering, and PR/USVI response plans to determine logistic support needs.
- Review transportation plans to prioritize distribution and general support to response operations.
- Adapt objectives or courses of action, as needed, to fit the diverse geography of the response unique to Caribbean, especially with the distances between islands, often mountainous topography, and sometimes limited flat terrain.
- Develop Pre-Scripted Mission Assignments, Memorandums of Understanding, or other instruments required to meet objectives and courses of action in Region II response plans and annexes.
- Pre-stage resources, as required, to meet anticipated PR/USVI needs for approaching tropical cyclones.

Phase 1b – Elevated Threat

End State: Evacuation planning has been coordinated with public- and private-sector transportation system owners and operators.

ESF-5

- Maintain the COP by providing information regarding evacuations (medical and mass) and initial route assessment.

ESF-7

- Based upon deliberate plans and initial impact estimates, coordinate with ESF-5 for selection of one of two Incident Staging Bases (ISBs).

Phase 1c – Credible Threat

End State: Pre-incident coordination with public and private stakeholders has led to the pre-identification of resources necessary for the reconstitution of transportation infrastructure after landfall. Staging of resources like pumps, generators, light towers, etc., are ready for deployment into the affected area after landfall.

ESF-1

- Activate the Regional Emergency Transportation Cadre.
- In conjunction with ESF-3, begin identifying priority transportation routes for initial damage assessment, and provide prioritized routes to the RRCC Planning Support Section and the Geographic Information Systems (GIS) for modeling analysis.
- Identify staff available to conduct initial assessment of prioritized routes.
- Coordinate with Protective Security Advisors and identify private sector Critical Infrastructure/Key Resources (CIKR) that could impact critical transportation (airports, seaports).

- Coordinate with ESF-5 for execution of the Air Operations Mission and provide Federal Aviation Administration Liaison Officer to Air Operations Branch.
- Coordinate with PR/USVI to determine DOT waiver requirements.
- Coordinate with ESF-2 for communication capabilities for assessment crews.

ESF-3

- Identify staff available for assessment and debris removal mission.

ESF-5

- Activate the Air Operations Branch and coordinate with ESF-1.
- Coordinate with United States Coast Guard to identify critical ports and navigable waterways that will require a Federally-led inspection.
- Coordinate with ESF-8 for the activation of the National Disaster Medical System (NDMS) and verify transportation routes and staging locations.

ESF-6

- Coordinate with PR/USVI partners to make initial estimate of number of service animals and household pets that may likely need to be evacuated and coordinate with ESF-11.
- Coordinate with PR/USVI partners, the Regional Disability Integration Specialist, and the RRCC Planning Support Section to make initial estimate of functional needs populations that may require evacuation.
- Develop mass-care transportation route plan that will support an emphasis on shelter-in-place where possible.

ESF-7

- Execute on-island private sector tractor trailer contract, and identify additional transportation commodities (Federal and private) and assets available in Region that may be rapidly acquired.
- Execute fuel contract in support of response operations
- Based upon initial assessments, coordinate with Defense Coordination Element and deploy personnel and equipment to establish ISBs.
- In conjunction with the RRCC Resource Support Section and ESF-1, examine additional private sector resources for purchasing required transportation equipment.

ESF-8

- Coordinate with ESF-5 for identification of all possible medical evacuation/movement resources, and coordinate with ESF-6 and External Affairs Private Sector Liaisons for both profit and non-profit resources.
- In conjunction with the RECU, coordinate the initial staging of medical patients and medical evacuations.
- Coordinate with Joint Regional Medical Planning Officers (JRMPOs) for identification of additional Department of Defense (DOD) medical evacuation personnel and aircraft.
- Initiate the transportation of medical caches, and coordinate with ESF-1 and-5 for routes and staging locations.
- Continue coordination with JRMPOs for deployment of additional DOD medical evacuation personnel and resources.

ESF-13

- Coordinate with ESF-1 and PR/USVI partners for possible evacuation support.

ESF-15

- Develop and disseminate public information regarding evacuation routes.

Phase 2a – Immediate Response

End State: Information regarding the operational environment has been analyzed to gauge preliminary planning and response needs. Resource allocation has been performed and has started to deploy to the field for employment.

ESF-1

- In conjunction with ESF-5 and ESF-13, deploy Department of Homeland Security Federal Air Marshal Transportation Security Advanced Teams to impacted airports.
- Coordinate with ESF-9 for initial proposed routing of Search and Rescue personnel and resources.
- In conjunction with ESF-3, develop assessment plan and deploy initial staff to conduct prioritized assessment of critical routes and infrastructure that directly supports critical transportation.
- Coordinate with RRCC Individual Assistance Branch Chief in order to identify Disaster Recovery Centers (DRCs) locations and logistics requirements.
- Provide status of routes to the RRCC Planning Support Section.

ESF-3

- Coordinate with ESF-1 and RRCC Situational Awareness Section to identify priority routes for debris clearance.
- Prepare to perform debris clearance if requested

ESF-5

- The Air Operations Branch will coordinate with ESF-1 and ESF-9 for movement of S&R resources and capabilities.

ESF-13

- Coordinate with PR/USVI partners for provision of additional personnel for security along incident response routes, as well as securing perimeter of incidents.

ESF-15

- Assist PR/USVI and local partners with dissemination of public information regarding evacuation routes.

Phase 2b - Deployment

End State: Priorities for the coordination and restoration of critical infrastructure have been established, and Federal resources in support of critical transportation efforts have been prioritized and employed in the affected area.

ESF-1

- Identify priority transportation routes and facilities in order for ESF-3 and Defense Coordination Element to develop debris removal plan and begin clearing debris.
- Based upon impact assessment, coordinate with ESF-3, the Regional Defense Coordination Element, and PR/USVI partners to prioritize the restoration of critical transportation routes (bridges, ramps, roads, etc.).
- Based upon impact assessment, coordinate with PR/USVI partners and Federal Aviation Authority to prioritize the restoration of airport facilities and capabilities.

ESF-3

- Coordinate with ESF-1 for clearance of debris from prioritized/critical roadways (goal is within 72 hours following a declaration).
- Conduct direct critical transportation infrastructure temporary repair or provide technical/contracting assistance for rapid restoration.

ESF-4

- In coordination with ESF-1 and ESF-3, provide debris clearance assistance, personnel, and capabilities.

ESF-5

- Coordinate with ESF-1 and 3 for debris clearance.
- Coordinate with ESF-1 for continued Air Operations Branch operations.

Phase 2c – Sustained Response

End State: Infrastructure assessments have been performed, and stabilization of critical transportation infrastructure has been completed. Survivor evacuation is complete, and vital resources and services have been delivered to disaster survivors and responders within the impacted area. Supplemental/Alternate service restoration possibilities are being discussed.

ESF-1

- Where mass evacuations occurred, coordinate with state partners and begin assessing ability for individuals to return where the critical infrastructure is stabilized and is able to support.

ESF-3

- Provide technical assistance, clear debris, and restore navigable water ways.

ESF-5

- Coordinate with Department of Homeland Security for cataloging of potential national surge engineer personnel (academic, professional organizations, retired Federal or military service, etc.).

ESF-6

- Coordinate with ESF- 1 for routing of life-saving/sustaining resources being pushed into areas where survivors are sheltering in place.

- Coordinate with nongovernmental organizations for the provision and routing of additional vehicles for the distribution of resources to individuals sheltering in place.

ESF-7

- Execute private sector transportation requirements and shipment of life-saving/sustaining resources to established ISBs.

ESF-12

- Coordinate with PR/USVI partners and ESF-7 to ensure fuel sources remain available for first responders and sustained incident response activities.

ESF-15

- Develop and disseminate public information regarding route and location of distribution of life-saving/sustaining resources.

Phase 3a – Short-Term Recovery

End State: Transportation infrastructure has been restored on an emergency/temporary basis to allow the free ingress and egress of personnel, equipment, and services into the affected area; permanent repair ongoing.

ESF-1

- Continue to identify secondary and tertiary routes for clearance and repair.
- As primary airport facilities become functional, identify additional facilities for restoration.
- Scale back air space management/restrictions as primary airport becomes functional and initial economic recovery can begin.
- Work with Regional Federal Disaster Recovery Coordinator to begin developing long-term recovery priorities.

ESF-3

- Continue to clear debris from secondary and tertiary routes.

ESF-8

- Facilitate the return of medical evacuees where infrastructure would support a return of patients.

Tab 2 to Appendix 3: Mass Evacuation

This section is included as part of the standard plan format but may also be used in the instance that a mass evacuation is called for, either pre-landfall or post-landfall. It has no specifics pertaining to the Caribbean.

The conduct of evacuation operations is generally a local, state, and tribal, and commonwealth responsibility. However, there are circumstances that exceed the capabilities of these jurisdictions to support mass evacuations. When practical and possible, precautionary mass evacuation support is provided before an event to move citizens away from a potential incident when warning is available and after an event when conditions are such that it is unsafe for citizens to remain in the area. In instances where Federal support is required, FEMA coordinates Federal support with the local, state, tribal, and commonwealth governments. This particular service is extremely rare for the Caribbean Area as location/distance away from the hazard can limit the effective execution of a mass evacuation.

Mass evacuation planning is required to provide an overview of functions, agency roles and responsibilities as well as overall guidelines for the integration of local, state, tribal, and Federal support in the evacuation of large numbers of people in incidents requiring a coordinated Federal response.

The ordering, sourcing, transportation, issuing, and movement of Federal resources generally follows the following procedural steps: mass evacuation resources (equipment and services) are identified; and secondly, contra flow planning is performed, when feasible.

The Federal Government coordinates with the impacted state(s) to determine the support local, state, and tribal governments require, including the possible need for a Federal evacuation of citizens. Local, state, and tribal governments provide their evacuation plans and information and any actions already taken to facilitate evacuation. All evacuation movements by air, including both civilian and military flights, must be coordinated with the Federal Aviation Administration (FAA). Coordination should include consideration for access and functional needs populations identified by local, state, and tribal governments as well as for service animals and household pets.

Chemical, biological, radiological, or nuclear contamination may impact potential evacuation routes. The Interagency Modeling and Atmospheric Assessment Center provides the official Federal prediction for airborne hazardous materials releases. This would be coordinated through the National Response Coordination Center (NRCC).

The Federal Government maintains that there are specific roles of state governments in hurricane evacuations, and these laws, policies, or protocols vary from state to state. (However, air evacuations require coordination with FAA regardless of the involvement of other Federal departments and agencies.) In general, state laws provide the Governor authority to declare an

emergency and assume extra powers and responsibilities to protect the health and safety of the citizens of the state. Specific powers relating to an evacuation include:

- Create, amend, or rescind rules or directives to provide the necessities of life or supplies and equipment.
- Direct state and local law enforcement officers, to include state National Guard units
- Prescribe evacuation routes, transportation modes, and destinations.
- Control ingress and egress to the disaster area and the occupancy of premises in the disaster area.
- Order, direct, compel, or recommend an evacuation.

Municipalities, counties, and parishes are given responsibilities to protect the health and safety of their citizens including the authority to order an evacuation of their jurisdiction and to provide first responders.

Appendix 4: Operational Communications

Coordination of response operations requires communications support to first responders, public notification systems, and sustainment of basic, positive private-sector communications until existing communications systems are restored. Responders accessing areas with major wind damage, water damage, and/or flooding may need to adapt technological solutions in a physically challenging environment in order to complete communications restoration.

Hurricane Operational Communications Objective: Prior to landfall, complete hardening of telecommunications resources against deformation and power outages. (Note this objective is revised from the All-Hazards Plan and is specific only to hurricanes and other tropical cyclones.)

Concept of Operations for Communications

The telecommunications industry in the Caribbean is run by a handful of private sector companies. These companies are, for the most part, responsible for maintaining and protecting their own infrastructure from catastrophic storms, and are quite efficient when it comes to restoration. There are minimal expectations that Federal assistance would be required to restore the infrastructure during the response and recovery of a storm. However, FEMA will maintain situational awareness of telecommunications restoration and coordinate these efforts in partnership with the telecommunications industry according to the following priorities: 1. Public safety; 2. Commonwealth/territorial requirements; and 3. Individual commercial service.

The major players for telecommunications in Puerto Rico are AT&T and Puerto Rico Telephone (PRT). PRT also owns Claro, which is a major commercial provider of wireless service. Other smaller companies include T-Mobile and Sprint. Verizon Wireless does not maintain a presence in the Caribbean, but has partnerships with other providers so their subscribers can communicate in Puerto Rico. In the US Virgin Islands, the main provider of landline and wireless services is Innovative Wireless and Mountain Wireless. Bronx Communications maintains the broadband radio networks. The main satellite providers are Stratos and Knight Sky.

However, emergency response workers still rely mainly on the existing commercial network. Should the infrastructure go down post-landfall, responders still have the capacity to communicate with stakeholders in the Federal, commonwealth, and territorial community. The Caribbean Area Division (CAD) in San Juan, Puerto Rico and the FEMA Bunker on St. Thomas have access to satellite communications that include voice and data. This redundancy also exists throughout the Federal community in the area. Other homeland security partners stand ready to provide communications assistance to FEMA to relay requests for Federal assistance to either the RRCC or NRCC.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations

End State: Planning, training, and exercises have been conducted, and systems build-out has enhanced the abilities of responders to communicate. Coordination with public and private partners has resulted in increased awareness of technological and procedural gaps and the solutions required to achieve and maintain communications spectrum management, operability, and interoperability.

ESF-2

- Multi-agency ESF that ensures the national disaster emergency communications policy for tropical cyclone response is disseminated to national and regional staff.
- Develop, maintain, train, and exercise national disaster emergency communications standard operating procedures (SOP) for tropical cyclone response.
- Participate in tropical cyclone response communications training and exercises with DOD and other Federal departments and agencies.
- Identify locations for the pre-staging of mobile emergency response support (MERS) detachments and assets in each Region for tropical cyclone response.

Phase 1b – Elevated Threat

End State: Based on preliminary information, operational communications plans are refined to address the operational communications needs of whole community partners.

ESF-2

- Activate department and agency SOPs for communications resources and support for a tropical cyclone response.
- Review pre-identified locations for the pre-staging of MERS detachments and assets and select appropriate locations based on area of potential impact.
- Provide national-level support for regional disaster emergency communications preparedness activities through Regional Emergency Communications Coordinators (RECCs) and MERS detachments. Maintain positive Federal-to-Federal and Federal-to-Territory communications prior to, during, and following the disaster.

Phase 1c – Credible Threat

End State: Existing Federal communications response equipment is catalogued and readied for deployment.

ESF-2

- Select communications staging locations from those pre-identified for each FEMA region while considering tropical cyclone path and available resources. Use ESF # 2 PSMAAs to various activations prescribed by phase and level of the disaster.

Phase 2a – Immediate Response

End State: Preliminary damage assessments have been conducted, in coordination with public and private sector partners, to identify the status of communications infrastructure. Federal personnel have been alerted.

ESF-2

- Gather situational awareness of regional communications infrastructure.
- Participate in Federal, Commonwealth, Territorial, and NGO partner conference calls.
- Coordinate MERS response with MERS liaison.
- Provide situational awareness to planning.
- Request FCC roll call report when area is safe.
- Host post-event conference calls with Commonwealth/Territorial POCs.
- Respond to communications requirement requests.
- Activate FCC Disaster Information Reporting Systems (DIRS).

Phase 2b – Deployment

End State: Resources and capabilities have been coordinated amongst public - and private-sector partners and deployed to the affected area to meet shortfalls. Preliminary Federal response equipment has been adjudicated and integrated with jurisdictional communications systems to restore operability.

ESF-2

- Gather situational awareness of regional communications infrastructure.
- Coordinate MERS response with MERS Coordinator.
- Provide situational awareness to planning.
- Assess cyclone response with key partners.
- Participate in Federal partner conference calls.
- Host post-event conference calls with Commonwealth/Territorial POCs.
- Respond to communications requirement requests.

Phase 2c – Sustained Response

End State: Sufficient communications have been reestablished within the affected area.

ESF-2

- Occupy Disaster Emergency Communications (DEC) branch at Joint Field Office (JFO) as needed.
- Gather situational awareness of regional communications infrastructure.
- Participate in Federal, Commonwealth, Territorial, and NGO partner conference calls.
- Coordinate MERS response with MERS conference.
- Provide situational awareness to planning, operations, and logistics.
- Host post-event conference calls with Commonwealth/Territorial POCs.
- Respond to communications requirement requests.

Phase 3a – Recovery

End State: As communications systems are restored, Federal communications support resources have been reconstituted or demobilized, as appropriate.

No additional tasks, beyond those identified within the All Hazards Plan have been identified, however, any additional communications support prescribed by the scope and timeline of the recovery process, or otherwise deemed appropriate.

Appendix 5: Executive Checklist

This appendix contains tables identifying major actions to be taken by Puerto Rico and the US Virgin Islands (Table A5-1) and FEMA Region II (Table A5-2). The tables also identify the time before the onset of tropical storm force winds when these actions are expected to be taken at the earliest.

Immediately following the PR/USVI Table is the FEMA Region II Executive Checklist (Table A5-2). It takes the actions from the Commonwealth and Territory and aligns them against executive-level considerations or decisions at the Region. This is not an all-inclusive execution checklist, but a high-level, senior leadership checklist that meshes with the key actions from PR and USVI. Both the table and timeline utilize an H-hour system. The “H” letter followed by a negative or positive number indicates the hours before or after onset of tropical storm force winds the action is expected to begin (i.e., partial activation of the Puerto Rico EOC is expected to take place at 96 hours before onset of tropical storm force winds in Puerto Rico, while the initial activation of the US Virgin Islands EOC will take place 72 hours before the onset of these winds in Puerto Rico).

The intent of this checklist is to give FEMA Region II leadership a guide that puts the actions at the States and city level with the Federal considerations in one document.

Table A5-1.
Timelines of Expected Actions by Puerto Rico and US Virgin Islands

Major Action to be Taken	When Action will be Taken Hours prior to the onset of tropical storm winds in:	
	<i>Puerto Rico</i>	<i>US Virgin Islands</i>
Initial Emergency Operations Center (EOC) Assessment/ Activation	H-120	H-120
Evacuation Planning and Preparation	H-96	H-72
Shelter Planning and Preparation	H-96	H-72 to 48
Partial EOC Activation Level	H-96	H-72
Request FEMA IMATs deployment	H-48	H-72
Health Care Evacuation Planning and Preparation	H-72	H-72
Pre-position commodities and supplies in isolated areas	H-72 to 48	--
Declaration of Emergency (by PR/USVI)	H-24	H-24
Health Care Facility Evacuation	H-72	H- 72
Full EOC Activation	H-24	H-24
Joint Information Center (JIC) Established	H-24	H-24
General Public Messaging/Press Conferences	H-24	H-24
Directed Evacuations Commence	H-48 to 36	H-48 to 36
Executive Order to Freeze Prices	H-36 to 24	--
Commonwealth and Territory Shelters - Opened	H-48 to 36	H-48 to 36
Request Pre-Disaster Emergency Declaration	H-24	H-24
Directed Shelter in Place	H-12	H-12
Airport Closures	H-12 to 6	H-12 to 6

Table A5-2. FEMA Region II Caribbean Hurricane Executive Checklist

Phase 1B – Elevated Threat Initial Assessment to H -72 hours (before onset of tropical storm (TS) winds)			
Objectives: <i>Increase and Reconcile Situational Awareness (SA), Prepare Plans and Reports, Ready Regional Response Coordinating Center (RRCC), Regional Response Coordinating Staff (RRCS) & Incident Management Assistance Team (IMAT) for Activation.</i>			
FEMA Expected Actions/Decisions: <i>When and where staff, resources, and key facilities will be located.</i>			
	Action Item	Task to	Note
Initial Assessment to H -120 hours (before onset of TS winds)			
1B-1	Monitor incoming and outgoing information from FEMA HQ, National Response Coordination Center (NRCC), Region II (R2) Division Directors, adjacent FEMA regional leadership, and Commonwealth/Territorial partners of R2’s hurricane readiness and response posture.	Response Division Director	Although the National Hurricane Center (NHC) products available at this point will not provide track forecast and cone or strike probability models, standard weather reports are sufficient to begin having discussions. Also, use the Tropical Weather Outlook Product to monitor possible systems that could become tropical within forty-eight hours. Be prepared for HQ and NRCC to begin asking R2 readiness questions. Although it may seem too early, begin discussing the timing for pre-landfall declaration with Puerto Rico and the US Virgin Islands. Determine if Stafford Act thresholds are met and discuss any concerns arising. Pay attention to the Stafford Act criteria required for PR/USVI receiving declarations: (1) A federal agency indicates a major disaster is imminent (2) Governor executes the Commonwealth/Territorial Emergency Plan and (3) indicates Direct Federal Assistance (DFA) is needed above and beyond PR/USVI or 3 or more counties (or geographic area equivalent to more than 100,000 individuals) receives evacuations orders
1B-2	As a proactive measure, consider where key facilities (Initial Operating Facility (IOF), Incident Support Base (ISB), Federal Staging Area(s), Regional Staging Area(s), Joint Field Office (JFO) will be located and with which FEMA teams.	Response Director, FCO’s, IMAT Team Lead	Must choose between Aguadilla (West Coast) and Cieba (East Coast). The speed and the direction of the storm system may be used as a factor in determining the most viable geographic location. Arrival of staff at the IOF and ISB needs to occur 72-48 hours before the onset of TS winds. Take into account billeting and travel time.
1B-3	Instruct the Region II Watch to alert appropriate Emergency Support Functions (ESFs), Federal Coordinating Officers (FCO’s), IMATs, Defense Coordinating Element (DCE), Mobile Emergency Response Support (MERS), and Liaison Officers (LNOs)) and American Red Cross (ARC) for possible deployment.	Response Director	Establish a deployment timeline for resources and teams. Operations orders issued for alert only; no movement at this time.
1B-4	Alert Hurricane Liaison Team (HLT) that their services may be needed.	Response Director	Alert for potential deployment of personnel to National Hurricane Center. Travel Authorization (TA) will come from HLT.
1B-5	Brief employees on emergency responsibilities for pre and post-storm operations.	All Division Directors	Task Watch to send out an all-hands email to R2 staff reminding them to review their RRCS/IMAT responsibilities.

1B-6	Ensure the RRCC is prepared for the arrival of staff at least by the 72 hrs. mark.	Mission Support Director <i>and</i> RRCC Branch Chief	Task Facility Support staff at the RRCC to make certain all information technology systems and redundancy systems are operational 12 hrs before the arrival of RRCS. Arrival of RRCS needs to occur at least 72 hours before the onset of TS winds. Take into account travel time for RRCS members. Task Facilities Manager or Regional Security Manager to notify NWS Earle so that they are aware of the influx in RRCS arriving at the base (possibly during off-hours).
1B-7	Refer to Regional FURRS staffing report to determine RRCS and IMAT teams to deploy and where to deploy to (Earle, Regional Office, PR/USVI offices).	Response Director	Review current staffing report to make informed decisions on what teams to deploy and for how long they will be deployed. Have the Activation Order drafted - This is for stand-by only. Consider informing the other RRCS and IMAT members as to when and where they may deploy to. The Watch may need one of the RRCS teams to enhance their operations while an RRCS team travels to Earle.
H-120 to H-72 hours (before onset of TS winds)			
1B-8	PR/USVI will implement Partial Activation operating structure by T-96 to 72 hours.	Situation Awareness	Be prepared to deploy IMAT and Liaisons to PR/USVI Emergency Operations Centers (EOCs).
1B-9	PR/USVI will be conducting their initial Principals meeting within this timeframe to discuss disaster declaration.	Legal	There are certain Stafford Act provisions that need to be met before pre declarations can be made. IMAT and Liaisons at PR/USVI EOC can assist with situation awareness (SA).
1B-10	Determine the nature of the hurricane threat to the Caribbean area so that key staff and resources can begin movement if needed.	Situation Awareness	Communicate with HLT by forecast period for their risk, vulnerability and threat analysis following issuance of the hazard forecast. Task Watch to run HURREVAC (hurricane evacuation decision-making software) for additional data. Pay attention to the storm track, forward speed, track forecast cone. The analysis the HLT and information from HURREVAC will help inform the decision to issue deployment orders and move resources to key facilities. If necessary, activate RRCC to Level III and place Watch on an enhanced level. If necessary, activate appropriate ESFs and DCO (Mission Assignment (MA) to coincide).
1B-11	Begin and continue to gain strategic level situation awareness about the weather system, FEMA and PR/USVI operations.	Situation Awareness	Ensure that an Information Collection Plan (ICP) is developed, evaluate the identified Essential Elements of Information (EEIs) against the actual incident, validate the Critical Information Requirements (CIRs) with RRCC senior leadership, and modify as needed. Connect ESF's to EEI's as they begin to arrive at the RRCC.
1B-12	Ensure products such as the initial Situation Report, Regional Support Plan, and Advanced Operations Plan (AOP) are developed, and that the pre-scripted mission assignments (MAs) to activate ESF's and other federal agencies to the RRCC are readied.	Response or RRCS Chief	Record actions and use formal documents to track actions such as activation orders and instructions to staff are used. MA's associated with moving the required personnel and equipment should be reviewed and issued as necessary.
1B-13	Create event in NEMIS, WebEOC; ADD location	Regional Watch Center	Have Watch establish an event in NEMIS and WebEOC, Mission Support to activate surge account and generate a TA, and create a disaster location in Automated Deployment Database (ADD) for deployments.
1B-14	Confirm that the appropriate MA's, commodities, <u>and</u> contracts (transport) are readied to support facilities, equipment, staff, and supplies going forward.	Resource Support Section Chief/Resource and Capability Branch Director	Verify capability to process mission assignments, contracts, LCSMS orders (enough staff, etc.). Begin, and continue to pay attention to, the actual and predicted unmet needs of PR/USVI. (Shelter commodities and staffing, fuel, generators, etc.). Review the list of potential actions in this plan and determine the appropriate mission assignments, commodities, and mode of transportation. This includes existing shipping contracts and items at the Distribution Center (DC) Caribbean (or other locations as available) that can be delivered to USVI in advance of the storm.

**Phase 1C – Credible Threat
(H-72 hours until onset of TS winds)**

Objectives: Prepare staff, equipment, and supplies for deployment and participate in SA calls paying particular attention to pre-storm actions of PR/USVI and locals. Begin to synchronize R2 actions with NHC forecast periods. Anticipate likely damage scenario/unmet needs for post storm operations and ready Federal teams and assets

FEMA Expected Actions/Decisions: Status of federal pre-disaster emergency declaration for commonwealth and territory – if and when.

	Action Item	Task to	Note
H-72 to H-48 hours before onset of TS winds			
1C-1	Form Unified Coordination Group with PR/USVI	IMAT	IMAT Puerto Rico and IMAT US Virgin Islands are to initiate joint meetings and develop joint objectives in preparation for landfall. Begin adaptive planning development.
1C-2	Receive briefing on Public Service Announcements local and PR/USVI will be issuing.	ESF-15	Work with supported jurisdictions and ESF's to establish JIC if needed. Coordinate unified messaging on preparedness and evacuations needs to residents and tourists (multi-language and access and functional needs).
1C-3	Request inventory brief on (a) commodities such as water, food, fuel, generators that will be needed pre- and post-storm; (b) the locations of the staging areas; and (c) the identification of shelters, their type (congregate care/human only, pet only, or co-located/human and pet) and status (open, standby etc.).	Resource Support	Understand what is in-place and due-in of water, food, fuel, generators, transport vehicles, etc. and that regulatory waivers, exemptions, and permits may need to be addressed. Sources of information are ESF: 3, 7, 12, and DCE.
1C-4	Assure that MAs are issued under the under correct funding stream	Order Processing Group Supervisor	Verify MA output meets the need of the event. Research to determine any shortfalls or limiting factors from within the RRCC (staffing, funding, network issues, etc.) Solve what issues can be addressed internally; elevate issues to another Region/HQ if workload can't be met. Ensure enough staff to sustain operations for at least 1 week, day and night shifts. Stage assets on FOS (Federal Operations Support) missions; upon PR/USVI requests, issue DFA (Direct Federal Assistance) missions.
1C-5	Gather information from HLT reports to provide senior leadership with information to base staffing levels for IMAT and RRCC.	Situational Awareness Section	Communicate with HLT on risks, vulnerabilities and threats. Task Watch to run HURREVAC for additional data. Pay attention to the storm track, forward movement, wind timing via HURREVAC to cease operations and rainfall forecasts.
1C-6	Evaluate the possibility of National Level Contracts	Resource Support Section Chief	Assist PR/USVI with requesting the execution of national-level contracts. These include: – Ambulance Contract – Evacuation Technical Assistance – Individual Assistance – Technical Assistance Contracts (IA TAC) – Personal Assistance Services (PAS) (Mass Care) – Transitional Sheltering Assistance (TSA) (hotels, motels, etc.) If the state requests, begin coordination calls w/HQ and/or NRCC.
1C-7	Consider extended operations based on hurricane forecast.	Chief or Deputy of RRCS	Request HQ to support with staffing.
1C-8	Support possible incoming HQ pushed resources	Resource Support Section Chief	Be prepared to have FEMA HQ begin to push resources such as Disaster Survivor Assistance Teams, National IMAT, etc. start to arrive in the -48 to -24 hour timeframe.

1C-9	USACE estimates on impacts	Situational Awareness/ Recovery	Work with the US Army Corps of Engineers to begin Disaster Impact Modeling (debris/water/blue roofs/critical facilities).
H-48 to H-24 hours before onset of TS winds			
1C-10	Between 48 to 24 hours, if not already requested, PR/USVI will submit request for disaster declarations.	Legal	Work with R2 legal to understand any limitations or exceptions to the policy at that moment. Task LNOs assigned to EOC's to monitor the declaration request so it can be forwarded to Legal and the Regional Administrator (RA). Pay attention to the necessary criteria needed for declaration.
1C-11	At the -48 hour time-mark, PR/USVI will open their sheltering system	Mass Care	ESF-6 will monitor and provide technical assistance.
1C-12	COOP or devolution needs to be considered.	Regional Administrator	Consult with HQ if the storm track and intensity are forecasted to be a widespread "worst-case-scenario" for the Caribbean Area Division. Be aware of other Federal agencies doing continuity of operations (COOP) or devolution.
1C-13	Monitor the inventory of FEMA logistics and resources.	Operations Support Group Supervisor	Track inventory levels of resources nationally and regionally. Ask about the predicted burn rates of commodities such as water, food, fuel at staging areas as well as at Points of Distribution. PR/USVI have pre-designated staging locations to accept logistics and commodities – have GIS map if possible.
1C-14	Assess the potential amount of debris and the storage and removal of debris. This includes pre-positioning teams and equipment and identifying temp debris sites.	Situation Awareness Section, Infrastructure Assets Group	Run debris models based on storm predictions and consider the USACE and DoD resources to support PR/USVI unmet needs.
1C-15	Monitor the status of critical infrastructure and key resources – to include private sector operations via PR/USVI and HQ conference calls.	Situation Awareness	Communicate with the USCG (sea) and PR/USVI Port Authority (air) on anticipated closures and the SA they need to inform their decision making. Private sector utility companies can provide status on their infrastructure. Private sector suppliers such as K-Mart, Wal-Mart, and SuperMax can provide their information on their delivery/supply schedule based on hurricane landfall.
H-24 hours before onset of TS winds			
1C-16	Fully Activate PR/USVI EOC	IMAT	IMAT and LNOs are to fully integrate with PR/USVI ESF staff.
1C-17	At -12 hours, PR/USVI will issue a Shelter in Place announcement	ESF 15	Ensure ESF 15 has aligned proper messaging at the JIC.
1C-18	Obtain a copy of the joint Incident Action Plan IAP with the PR/USVI(s).	Planning Support	The goal is to have this within 24 hours following the declaration, with the FCO and IMAT facilitating the development of the IAP.
1C-19	Execute call down list	Division Directors	At -12 hours prior to TSF winds making landfall, have Staff Support conduct chain of command roll call.
1C-20	Model projected impacts.	Situation Awareness	Consider having a HAZUS or Army Corps debris models run to help determine which areas will have greatest impacts. Pay attention to potential life sustainment and life safety issues (water rescues, isolation rescues, food and water drops, etc.)
1C-21	Prepare for widespread flooding and power outages secondary to storm surge and down trees if maximum sustained and wind gusts are forecasted to exceed 50 mph and high tide is occurring simultaneously to hurricane arrival.	Resource Support Section Chief	Be prepared (deploy/stage assets as appropriate at ISB or other locations outside affected area) for PR/USVI to request: <ul style="list-style-type: none"> • Saw crews • Un-watering pumps (some underground infrastructure exists) • Debris removal equipment • Generators & fuel • Light towers • Search & Rescue teams • Communications equipment Use models, historical reference and subject matter experts to decide on what items are needed.
1C-22	Align operational objectives	Planning Support	Instruct the IMAT Team lead and Chief/Deputy of the RRCS to align operation objectives for the next 72 hours.
1C-23	Identify potential JFO location(s).	Resource Support	Review list of JFO's used during recent disasters and Government Services Administration) GSA should be able to generate a list of potential sites. Include the PR/USVI and FCO's in discussion.

Phase 2A/B – Deployment
(Onset of TS winds to +72 hours after TS winds subside)

Objectives: *Ensure teams and assets are safely in place prior to arrival of TSF winds.*

Expected Actions/Decisions from FEMA: *Deployment of teams and assets for PDA’s and support for unmet needs.*

	Action Item	Task to	Note
0 hours = Onset of TS winds			
2A/B-1	Obtain weather briefing and 72 hour forecast to determine when FEMA can begin conducting outside operations.	Situational Awareness	Have HLT brief on <u>current weather situation</u> such as heavy rains, tornados, high winds in order to determine when <u>exactly</u> it is safe to conduct post-response activities such as aerial surveillance, search and rescue, preliminary damage assessment. Include IMAT Team Lead and Safety Officer in discussions. Ensure staff that will need to work outside such as the Disaster Survivor Assistance Teams, Preliminary Damage Assessment teams, etc. have read safety plan.
0 to +72 hours after TS winds subside			
2A/B-2	Identify re-entry status/process	Situational Awareness	Obtain status from Puerto Rico and US Virgin Islands on timing of re-entry or residents into evacuated communities.
2A/B-3	Coordinate with States on disaster declarations.	Legal Advisor	Legal will review Governor’s’ requests for Federal Assistance (Disaster Declarations) after being reviewed by Program Area and Regional Administrator
2A/B-4	Assess level of RRCC and adjust as necessary.	RRCC Chief	If extended operations, adjust staffing levels and consider replacing R2 staff with other FEMA staff.
2A/B-5	Assess overall staffing levels and future operational period staffing needs.	Center and Staff Support Section Chief	Be prepared for HQ to send Surge Capacity Force Teams or be prepared to justify why Surge Capacity Force Teams are required.
2A/B-6	Coordinate and prioritize the deployment of Federal resources	Resource Support	Allocate resources and personnel based on shared situational awareness and operational analysis.
2A/B-7	Optimize staffing for FEMA field teams until Surge Capacity Force Teams arrive.	IMAT	Task IMAT to coordinate with Puerto Rico and US Virgin Islands as to where Disaster Survivor Assistance Teams, Individual Assistance (IA) and Public Assistance (PA), and Preliminary Damage Assessment (PDA) teams should deploy to first.
2A/B-8	Obtain an estimate of actual debris including sand wash up in the coastal communities.	Infrastructure Assets Group	Task IMAT to coordinate with United States Army Corps of Engineers (USACE) in debris assessments.
2A/B-9	Request a briefing on the status of available and needed commodities such as water, fuel, generators, shelter capacity and capability, etc.	Infrastructure Assets Group, ESF 6	Deploy Prime Power Team for generator unmet needs. Understand the commonwealth/territory’s intent on power restoration, water services, and privately-owned fuel facilities (to restore the water and fuel supply to survivors).
2A/B-10	Check with the Captain of the Port and Port Authorities for the status of the Air and Sea ports.	Infrastructure Assets Group	Closure of the sea ports and harbor will have secondary effects to incoming fuel deliveries. Airport closures will limit quick access to resources (especially personnel). Identify which federal resources can assist in opening ports.
2A/B-11	Check on status of essential transportation infrastructure.	Infrastructure Assets Group	Attain assessment of main arteries of transportation across the islands. Also, the access roads to/from the airports and sea ports as well as any bridges that may have been compromised during the hurricane.
2A/B-12	Obtain briefing on the need for temporary housing.	ESF 6	Coordinate with Puerto Rico and the US Virgin Islands on the areas affected - consider sites for temporary housing solutions.
2A/B-13	Develop an RRCC to JFO transition plan.	Planning Support, IMAT	The timing of the transition can be based on when the JFO will be operational and the FCO is prepared to take over operations. RA will issue letter authorizing FCO a designation and delegation of authorities’ letter/memo.
2A/B-14	Develop an RRCC demob plan.	Planning Support	Once transition plan is implemented, work with RRCC Chief on timely release of RRCS. Make certain that Puerto Rico and US Virgin Islands are aware of demob timing.

Appendix 6: List of Acronyms

AHP	All Hazards Plan
AOR	Area of Responsibility
CBP	Customs & Border Patrol
CCCU	Congregate Care Coordination Unit
CFLA	Coastal Flood Loss Atlas
CFR	Code of Federal Regulations
CIKR	Critical Infrastructure and Key Resources
CIR	Critical Information Requirements
CODEL	Congressional Delegation
CONUS	Continental United States
COP	Common Operating Picture
DCE	Defense Coordinating Element
DCO	Defense Coordinating Officer
DFA	Direct Federal Assistance
DHS	Department of Homeland Security
DMORT	Disaster Mortuary Response Team
DOD	Department of Defense
DPMU	Disaster Portable Morgue Unit
EA	External Affairs
EAO	External Affairs Officer
EEI	Essential Element of Information
EMAC	Emergency Management Assistance Compact
ENS	Emergency Notification System
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ESF	Emergency Support Function
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FIOP	Federal Interagency Operational Plan
FOC	FEMA Operations Center
HAZMAT	Hazardous Materials
HES	Hurricane Evacuation Study
HHS	Health and Human Services
HLT	Hurricane Liaison Team
HQ	Headquarters
HSPD	Homeland Security Presidential Directive
IA	Individual Assistance
IAP	Incident Action Plan
IGA	Inter Governmental Affairs
IMAT	Incident Management Assistance Team
IOF	Interim Operating Facility
ISB	Incident Support Base
JFO	Joint Field Office
JIC	Joint Information Center

LEO	Law Enforcement Officer
MA	Mission Assignment
ME	Medical Examiner
MERS	Mobile Emergency Response System
MOC	Member(s) of Congress
NCH	Natural & Cultural Resources & Historical Properties
NDMS	National Disaster Medical System
NGO	Non-Governmental Organization
NHC	National Hurricane Center
NHP	National Hurricane Program
NIMS	National Incident Management System
NOAA	National Oceanic & Atmospheric Administration
NRCC	National Response Coordination Center
NRF	National Response Framework
NSS	National Shelter System
NWS	National Weather Service
OCONUS	Off-Continental United States
OFA	Other Federal Agencies
PA	Public Assistance
PPE	Personal Protective Equipment
POD	Point of Distribution
PREMA	Puerto Rico Emergency Management Agency
PSMA	Pre Scripted Mission Assignment
RDIS	Regional Disability Integration Specialist
REC	Regional Emergency Coordinator
RELT	Regional Emergency Liaison Team
RISC	Regional Interagency Steering Committee
RRCC	Regional Response Coordination Center
RSC	Responder Support Camps
RSF	Recovery Support Function
RSP	Regional Support Plan
SAA	Situation Awareness Alert
SAR	Search and Rescue
SAS	Situational Awareness Section
SEOC	State Emergency Operations Center
SLOSH	Sea, Lake, and Overland Surge from Hurricanes
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
VITEMA	Virgin Islands Territorial Emergency Management Agency