Description of document:	Federal Emergency Management Agency (FEMA) Hurricane Annex of the Region II All Hazards Plan, 2014, 2021
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Source of document:	FOIA Request Federal Emergency Management Agency FOIA Officer Disclosure Branch 500 C Street, S.W Mail Stop 3172 Washington, D.C. 20472-3172 Email: fema-foia@fema.dhs.gov Online FOIA System

U.S. Department of Homeland Security
500 C Street, S.W. Mail Stop 3172
Washington, DC 20472-3172

FEMA

April 19, 2022

SENT VIA E-MAIL TO

Re: **FEMA FOIA Case Number 2022-FEFO-00035**

This is the final response to your Freedom of Information Act (FOIA) request to the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), dated and received in this office on October 18, 2021. You are seeking the Hurricane Annex of the Region II All Hazards Plan.

A search was conducted of FEMA's Region II office for documents responsive to your request. The search produced a total of 292 pages, which are enclosed in full. The cut-off date for the search is October 18, 2021.

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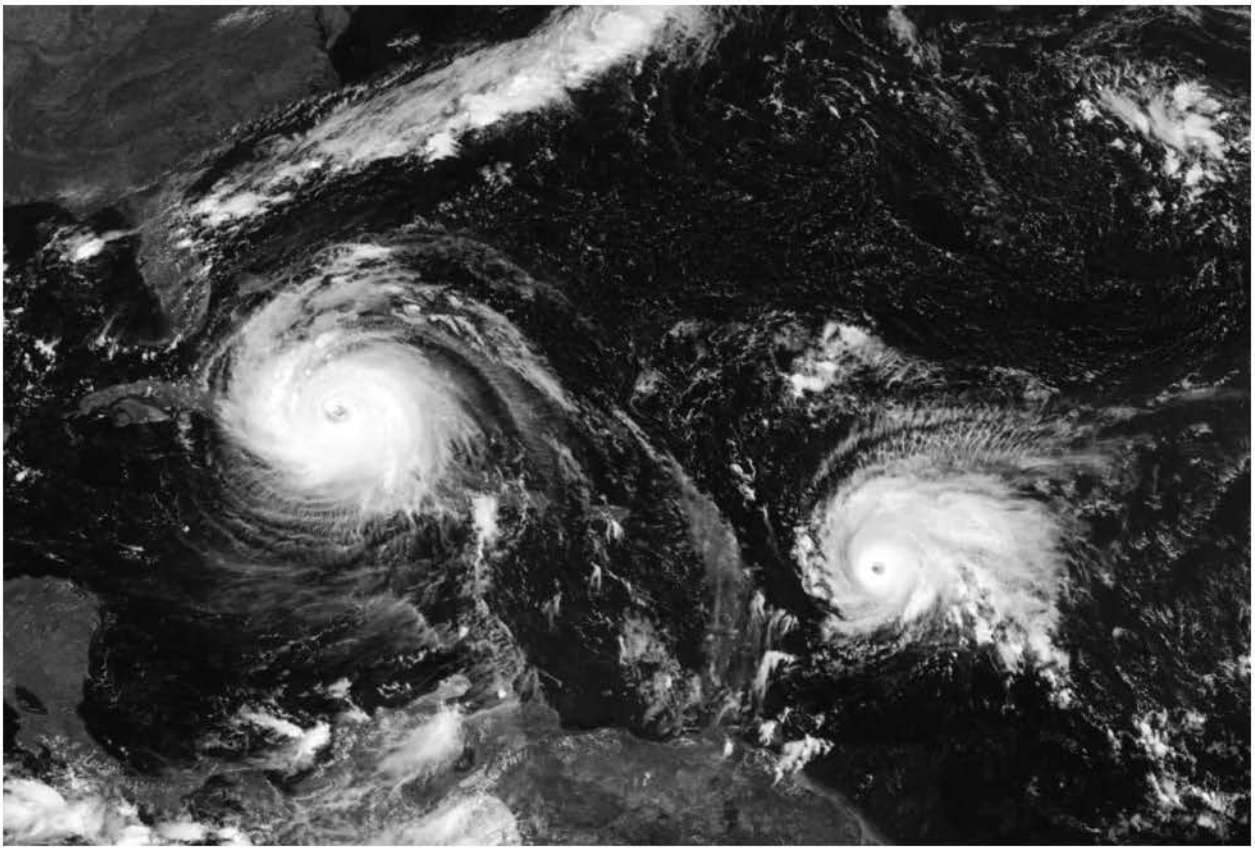
Sincerely,

Gregory Bridges
Chief
Disclosure Branch
Information Management Division
Office of the Chief Administrative Officer
Federal Emergency Management Agency
U.S. Department of Homeland Security

Enclosures: Responsive Records (292 Pages)



Annex G – Puerto Rico Hurricane

The Caribbean All-Hazards Plan

The United States Department of Homeland Security
Federal Emergency Management Agency, Region 2

April 2021

FEMA

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Table of Contents

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Annex G: Puerto Rico Hurricane

1 Situation

The Commonwealth of Puerto Rico (Puerto Rico, the Commonwealth), one of the Federal Emergency Management Agency (FEMA) Region 2 Caribbean Areas of Responsibility, is prone to tropical weather threats. Hurricanes and other tropical cyclones cause life-threatening storm surge, wave action, extreme winds, landslides, flooding, offshore hazards, and tornadoes. Tropical cyclone threats are usually identified before their hazardous conditions can have an impact on Puerto Rico, which allows time for protective actions, resource deployment, and other pre-landfall preparatory activities.

In 2017, Puerto Rico was struck by two consecutive Category 5 hurricanes: Irma and Maria. The inter-agency response to hurricanes Irma and Maria presented many firsts for FEMA as an agency and a coordinating body, including the largest and longest duration of temporary power, feeding, and air operations to date. Puerto Rico is still recovering from these incidents. For example, recovery operations are still underway. Even though critical infrastructures are still being repaired, they are operational. This factor, however, could be another challenge for the Response to the next hurricane.

The geography and demographic base of Puerto Rico adds complexities for the Response to a notice incident, making it more challenging. Limited points of ingress, limited usable land-space, and pre-existing socio-economic conditions call for an accelerated response.

An overview of points of ingress:

- Four major airports and three seaports are likely to be available for use during the Response.
- Two of the seaports have existing infrastructure capable of supporting the Response; the infrastructure of one of the seaports would have to be augmented to support the loading and unloading of more than dry bulk goods.
- The rapid identification of the impacted but usable airports and seaports would facilitate making the necessary changes to the first federal resource packages. In addition to limited points of ingress, limited usable land space necessitates the maintenance of a minimal federal footprint to the greatest extent possible while still meeting response goals. Moreover, providing shelters for responders and survivors, if addressed on a mass scale, will be problematic because of limited usable space coupled with wetlands that are likely to flood.

1.1 Introduction

Even though the hurricane season officially begins on June 1 and ends on November 30, tropical cyclones can form before June 1 and after November 30. Puerto Rico is very vulnerable to tropical cyclones because of its location in the northeast Caribbean Sea. During the peak of the hurricane season tropical disturbances moving off the west coast of Africa regularly threaten the Caribbean Islands.

Puerto Rico is further east in the tropical-cyclone formation area of the Atlantic Ocean than other United States areas of interest, which often means that more attention is given to the potential impact of a hurricane on locations in the Continental United States (CONUS) than the tropical-cyclone formation area. Puerto Rico might experience the catastrophic impacts of the direct

strike of a hurricane and the moderate to minor impacts of a hurricane or a less powerful tropical weather system passing near the Commonwealth.

As an isolated island Outside the Continental United States (OCONUS), Puerto Rico presents exceptional logistical challenges, which require specific capabilities for air and maritime transport and additional time for the delivery of CONUS-based resources. Moreover, the size and scope of a hurricane can impact every resident of Puerto Rican. Because most of the survivors will stay in Puerto Rico during the recovery process, they will face greater hardships that survivors in the CONUS, who can temporarily relocate to a safe area outside the affected area.

(**Note:** More information about Puerto Rico and its municipalities can be found in Appendix B-1: Puerto Rico Profile to the CAHP and in the Geospatial Resource Center.)

The FEMA Region 2 Geospatial Information Center has created a map viewer, a set of interactive maps and related data, on the FEMA GeoPlatform for the Region 2 All-Hazards Plan, which is available to the public. The map viewer provides an abundance of useful geospatial information for the public and the responders, including map journals and viewers. This information includes a wide variety of static and live layers.

Information for the public is available on a public-facing map viewer.

The Puerto Rico Planning Viewer can be found on the link to the Internal and External All-Hazards Plan. FEMA recommends the use of the Firefox browser.

http://fema.maps.arcgis.com/apps/webappviewer/index.html?id=6d961e268f6f41ffa1f1e13e48dd8b1d

1.2 Purpose

Annex G provides a strategic operational and tactical framework for decision making after a catastrophic hurricane makes landfall in Puerto Rico. The scope of Annex G is the stabilization of response operations in accord with the Community Lifeline Construct[1] while providing inputs for making decisions about the long-term recovery in view of the geographic separation of Puerto Rico from CONUS. The primary purpose of Annex G is the rapid application of the resources that will support the seven Community Lifelines, which are necessary to save lives, protect property and the environment, and meet basic human needs in a post-catastrophic incident. The secondary purpose is to maintain public confidence in both the ability of the Federal Government and the Commonwealth Government to respond to and recover from a hurricane.

The focus of this framework is on (1) integration with the other FEMA Region 2 planning efforts and (2) integration and synchronization with the federally defined Core Capabilities for accomplishing mission-essential tasks in conjunction with whole-community partners. Annex G focuses on integration with the Caribbean All-Hazards Plan (CAHP), which is overseen by Region 2's Caribbean Area Office [CAO]. Other integrative efforts are focused on complementing, not replacing, existing national and regional guidance, standards, and plans, which are outlined in the Authorities Section of the CAHP.

[1] The Community Lifeline Construct provides an outcome-based frame of reference that is focused on the survivors, which helps responders identify the root causes and distinguish the highest priorities and the most complex issues based on information about the incident. More information can be found in the Lifeline Implementation Tool Kit.

1.3 Scenario

The following threat scenario, which is scientifically feasible and historically probable, sets the scene for developing the CAHP.

During the first week of September a tropical storm forms and within 48 hours builds to a Category 4 Hurricane with sustained winds of 140 miles per hour (mph). In this scenario the tropical storm makes landfall on the east coast of Puerto Rico as it moves westward at 12 mph. The hurricane has a catastrophic impact on the islands of Puerto Rico, Vieques, and Culebra before exiting on the Commonwealth's northwest coast. On higher ground, sustained winds of 162 mph are higher than the expected winds of a Category 5 Hurricane. Puerto Rico may experience a complete power outage, which will affect 1.57 million customers. Infrastructures will be damaged by these high winds. The estimated impact of the hurricane will result in 11,000 deaths, more than 6,000 injuries, and 1,000 rescues. The hurricane will (1) affect 1,750,000 persons, all of whom will need temporary shelter, food, and water and (2) displace 70,000 households, who will need long-term shelter.

1.3.1 General Information about a Hurricane

Tropical cyclones, which include hurricanes, tropical storms, and tropical depressions, are characterized by a low-pressure center, strong winds, and a spiral arrangement of thunderstorms that produces heavy rain. Tropical cyclones form over tropical or subtropical waters with surface temperatures of 80°F or higher. As warm, humid air rises, it causes an area of lower air pressure below. Air from surrounding areas pushes into the low-pressure area, which, having been fed by the ocean's heat and water evaporating from its surface, causes the storm to grow and intensify.

Table 1: Types of Hurricane

Tropical Cyclone Type	Associated Wind Speed		
	Miles per Hour (mph.)	Knots (kn.)	Kilometers per Hour
Major Hurricane (Cat. 3–5)	111 mph. or higher	96–112 kn. or higher	178 km/h or higher
Hurricane (Cat. 1–2)	74–110 mph.	64– 95 kn.	119–177 km/hr.
Tropical Storm	39–73 mph.	34–63 kn.	63–118 km/h.
Tropical Depression	38 mph. or lower	33 kn. or lower	62 km/hr. or lower

1.3.2 Damaging Winds

Table 2 shows the wind speed and the type of damage that is expected for each category on the Saffir-Simpson Hurricane Wind Scale.

Table 2: The Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed	Types of Damage
1	74–95 mph.	Dangerous winds produce some damage: ▪ Well-constructed frame homes could suffer damage to roof, shingles, vinyl siding, and gutters. ▪ Large branches of trees could snap, and shallowly rooted trees could be toppled. ▪ Extensive damage to power lines and poles is likely to result in power outages that could last for several days.
2	96–110 mph.	Extremely dangerous winds will cause extensive damage: ▪ Well-constructed frame homes could sustain major damage to roof and siding. ▪ Many shallowly rooted trees could be snapped or uprooted, blocking many roads. ▪ Almost a total loss of power is expected with outages that could last from several days to weeks.
3 – Major	111–129 mph.	Devastating damage occurs: ▪ Well-built framed homes could sustain major damage to or the removal of roof decking and gable ends. ▪ Many trees could be snapped or uprooted, blocking many roads. ▪ Electricity and water are unavailable for several days to weeks after the storm passes.
4 – Major	130–156 mph.	Catastrophic damage occurs: ▪ Well-built framed homes could sustain severe damage with loss of most of the roof and some exterior walls. ▪ Most trees are snapped or uprooted, and power poles are downed. Fallen trees and power poles in residential areas isolate the survivors. ▪ Power outages last weeks or months. ▪ Most of the area is uninhabitable for weeks or months.
5 – Major	157 mph or higher	Catastrophic damage occurs: ▪ A high percent of framed homes are destroyed, including the total failure of the roof and the collapse of walls. ▪ Fallen trees and power poles in residential areas isolate the survivors. ▪ Power outages last for weeks or months. ▪ Most of the area is uninhabitable for weeks or months.

1.3.3 Storm Surge and Wave Action

Storm surge is the abnormal rise of ocean water above the level of a predicted tide. Storm surge is mostly produced by the force of tropical cyclone winds pushing ocean water onshore. The degree of flooding from storm surge is a function of slight changes in the storm's track, intensity, forward speed, size, angle of approach, and central pressure as well as the shape and characteristics of bays and other coastal features.

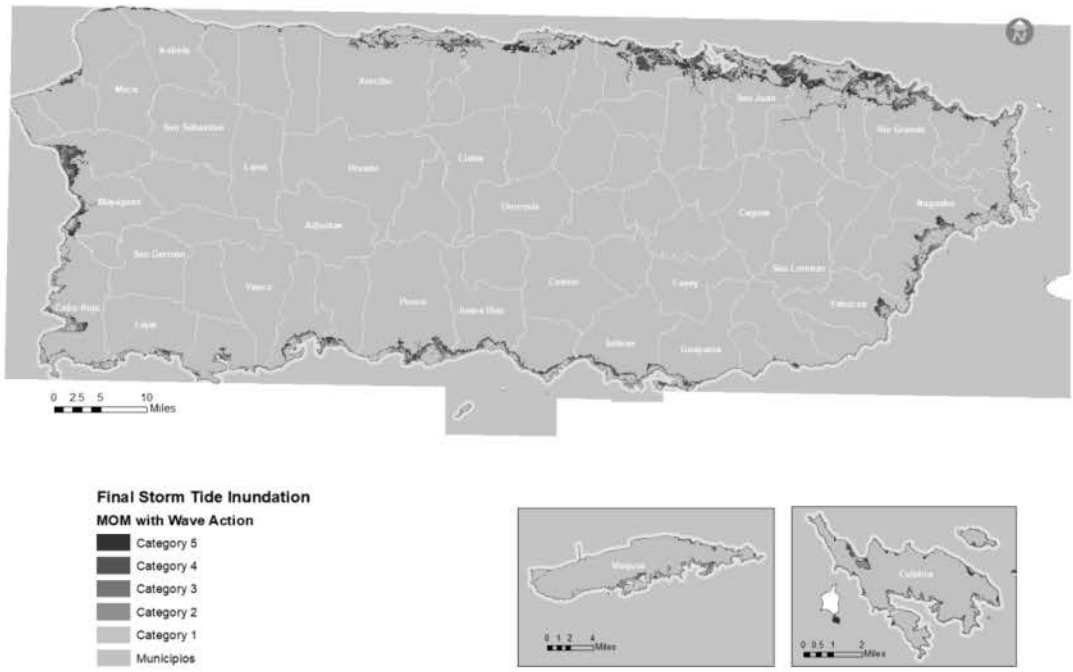

Figure 1: The Vulnerability of Puerto Rico to Storm Surge

1.3.4 Assumptions

The following assumptions apply to Annex G:

- Region 2 will take an aggressive, forward-leaning posture, which will begin with obtaining early Situational Awareness of the track and intensity of the tropical cyclone before requesting federal support from other jurisdictions in Region 2.
- A decision will be made when to transition primary Incident Support from Region 2's Regional Response Coordination Center (RRCC) to the National Response Coordination Center (NRCC) before H-96 hours.
- During the hurricane season, there will be a pre-designated Federal Coordinating Officer, a National Incident Management Assistance Team, an additional Incident Management Assistance Team (IMAT), and designated field leadership. The Region 2 IMAT will be postured to support the Commonwealth.
- The incident will produce cascading effects.
- Resources will not reach the entire affected population.
- A portion of the designated shelters will be damaged or destroyed. Federal support to survivors who do not evacuate will be required, including:
  - Shelter operations (Including at-risk populations);
  - Subsistence operations; and
  - Search and rescue operations.

- Mass care services will be quickly overwhelmed by the sheer number of survivors, including at-risk persons (e.g., persons with minor injuries, children, seniors, persons with physical, sensory, cognitive, behavioral, and/or chronic conditions, and persons who use personal assistance services [PAS]).
- The emergency evacuation of critically ill patients will require federal support.
- A catastrophic hurricane will impact neighboring Caribbean islands and close major airports that have the capability of facilitating the federal response. Airports in Puerto Rico might not be available for federal response activities during the first 72 hours or longer after the hurricane strikes.
- If a hurricane has a catastrophic impact on both Puerto Rico and the USVI, they will make competing demands for limited federal resources.
- Many first responders will also be survivors, many of whom will have to attend to family matters before reporting for work.
- Some communities will be separated from supporting resources due to impassable primary roads.
- Local medical facilities will not be able to meet all healthcare needs of the population.
- The opening of airports and seaports will require Federal assistance.
- A major fire or fires will overwhelm already stressed fire departments.
- There will be a limited number of qualified inspectors to support assessments of both public and private infrastructures.

1.3.5 Key Considerations

The following are Key Considerations in planning for the Response to an incident:

- A Category 3, 4, or 5 Hurricane will require the mobilization and deployment of federal assets before the onset of tropical winds.
- Location of Federal Coordinating Officer (FCO), Incident Operating Facility (IOF), and Joint Field Office (JFO).
- Determination of specific national-level logistics and supply-chain-management capabilities.
- Personnel deployed by federal departments and agencies will require temporary housing, food, fuel, sanitary services, and water during response operations.
- The number of healthcare facilities impacted or damaged and number of healthcare facilities that need generator or other power assistance.
- The status of local area government communications critical infrastructure.
- The extent of damages to private sector communications critical infrastructure.
- Major highways, bridges, airports, and seaports will be damaged and closed to traffic.
- The status of the power grid and power plants and the estimated time until restored.
- The number of water and wastewater facilities damaged, destroyed, or without power.

- The number of leaks, spills, and/or releases of hazardous materials any potential releases from facilities, vessels, pipelines, and other sources.
- Major roadways, bridges, airports, and seaports will be damaged or closed to traffic.
- The number of local fire stations that are without power or damaged, flooded, or destroyed.
- Computer and communications systems, which incorporate electronic information, networks, and their services within the area affected by the incident, could be inoperable, degraded, or include features that prevent local and federal collaboration.
- The interdependent nature of infrastructure systems and the complexity of the impacts on them will require coordination among a broad range of stakeholders to assess, set priorities for, secure, and restore the affected systems.
- Utility outages (e.g., water, petroleum, electricity) in the affected area and the estimated time until restoration.
- The status of releases of fuel from the reserves to meet the survivors' requirements (e.g., for cars, generators).
- Population requiring lifesaving and life-sustaining support, including food and emergency supplies.
- Human and animal diseases and illnesses could develop in the affected area.
- The impact of the incident on agriculture and natural resources.
- The number of buildings damaged or destroyed, the number of buildings without power, the number of the injured, and number of fatalities.

1.3.6 Planning Factors

To calculate estimates of impacts, detailed research was conducted, which included an analysis of the physical effects of previous incidents on the survivors and disaster modeling.

Table 3: Planning Factors

List of Standard Impacts by Category	Size of Each Impact
Municipalities affected	78
People with limited English proficiency affected	14,000
Partner organizations involved in incident management	62
Safety and Security	
Structural fires	100
People requiring rescue	1,000
Damaged natural and cultural resources and historical properties registered in the affected area	30
Food, Water, Shelter	
Persons affected	3,500,000
Persons with an access or a functional need (26% of the population)	910,000
Persons requiring food and water	1,750,000
Persons with an access or a functional need requiring food and water	250
Animals requiring shelter, food, and water	250
Persons requiring evacuation (50% of the population)	1,750,000
Persons with an access or a functional need requiring evacuation	780

List of Standard Impacts by Category	Size of Each Impact
Persons requiring long-term housing	70,000
Persons with an access or a functional need requiring accessible long-term housing	7,000
Persons requiring a shelter	12,000
Persons with an access or a functional need requiring an accessible shelter	250
Persons requiring temporary, non-congregate housing	15,000
Persons with an access or a functional need requiring accessible, temporary, or non-congregate housing	1,500
Customers without wastewater service	1,000,000
Customers without potable water service	1,750,000
Businesses closed because of the incident	100,000
Health and Medical	
Affected healthcare facilities and social service organizations	20
Persons requiring medical care	6,000
Fatalities	11,375
Energy	
Customers without electric power	1,473,000
Communications	
Customers without communications services	2,000,000
Transportation	
Miles of road affected	5,070
Hazardous Materials	
Sites of the release of hazardous materials	1,000
Persons exposed to hazardous materials	50

2 Mission

In response to a catastrophic hurricane, FEMA and its federal partners will support the Government of Puerto Rico by implementing the Community Lifelines Construct. This Construct increases the effectiveness of a Response that is supported by the Federal Government, managed by the Commonwealth, and executed by its municipalities.

3 Execution

The Federal Government will coordinate with its Whole Community partners to incorporate the lifeline construct to deliver the critical services within a community that must be stabilized or re-established. FEMA executes Lines of Effort (LOE) to operationalize the Core Capabilities (the ways) for response and recovery planning and operations.

3.1 Senior Leaders' Intent

FEMA Region 2 Senior Leadership intent for Puerto Rico emergency operations includes:

- Ensure the timely, effective, and coordinated response of the unified coordination structures in support of Puerto Rico.
- Save lives and sustain the health and safety of the people in Puerto Rico.

Regional Administrator's Vision:

Stabilization of Community Lifelines that alleviate immediate threats to life and property when communities are impacted by disasters.

- Initiate immediate actions to stabilize the Community Lifelines in the Puerto Rico.
- Ensure the safety of responders and other personnel throughout the disaster's lifecycle.
- Coordinate with partner organizations to provide nationwide unity of effort in preparing for, responding to, and recovering from Puerto Rico disasters.

3.1.1 Desired End State

A successful response will not be measured in terms of the time elapsed or the amount of resources expended. It will be measured in terms of meeting the objectives outlined in this annex and establishing certain conditions on the ground. The conditions that determine a successful response and the transition to the recovery are:

- All survivors are accounted for, have received emergency first aid or medical assistance, have access to food and water, and are receiving individual assistance in accord with the Disaster Declaration, which includes, but is not limited to, crisis counseling, the provision of mass-care comfort kits, and support for the reunification of families.
- No visitors are stranded in Puerto Rico.
- Survivors have returned to their home or have an adequate shelter, including persons with access and functional needs and persons with household pets and service animals.
- The environment in the affected area has been stabilized; the leaks and spills of hazardous materials have been contained or stabilized.
- Essential government functions are operational.
- Critical Infrastructure and Key Resources (CIKR) have been restored and are operational.
- The mass fatality response has been completed.
- The conditions for the resumption of commerce in Puerto Rico, including tourism, have been met.

3.2 Information Requirements

3.2.1 Region 2 Information Requirements

Region 2, in coordination with Federal, Commonwealth, and other departments and agencies, will gather, analyze, and disseminate intelligence regarding the characteristics, the predicted impacts, and the actual impacts of a hurricane. The intelligence will be analyzed and disseminated to assist in the determination and execution of prospective courses of action for sheltering, mass care, and the other initial response operations. This information will include the hurricane's footprint, its immediate and cascading effects, and its impact on the affected population and infrastructure. The intent of this process is to provide the decision-makers with clear, timely, and accurate information about the incident and other simultaneous or nearly simultaneous incidents, which supports timely judgements that will influence the response to one or more incidents. The following assumptions apply to the information requirements for a tropical cyclone.

- Region 2 will retain the ability to gather, assess, analyze, and disseminate critical information and to develop a Common Operating Picture (COP).

- Region 2 will retain the ability to coordinate the federal response to a hurricane.
- The primary source for tropical weather systems forecasts is the National Oceanic and Atmospheric Administration's (NOAA) National Hurricane Center (NHC) in Miami, Florida.
- The National Hurricane Center and entities of the National Weather Service (NWS) develop and publish several graphical and text products that provide up-to-date information and analyses of potential and active tropical weather systems that could affect the Commonwealth.

The Threat Analysis Unit (TAU), which complements the Region 2 Watch, is tasked with analyzing information used to determine trends, outcomes, and impacts. Region 2 will transition the development of intelligence operations from steady-state operations to event-focused activities. FEMA will maintain Situational Awareness through WebEOC and prescribed reporting mechanisms to ensure rapid action in response to an emergency or a disaster occurring simultaneously with the incident. The priority is to obtain situational awareness through a Common Operating Picture. The analysis of critical information, including a forecast of the hurricane's intensity, is not a precise science. Therefore, an analysis of threats and hazards is often based on objective data, such as plans and capability assessments, and subjective data, such as the experience acquired from previous incidents. Additional inputs include, but are not limited to, the following:

- capacity, such as plans, identified threats and hazards, risk assessments, stakeholder preparedness reviews, and after-action reports from previous events;
- The actual or anticipated impact of the incident based on predicted areas affected or previous disaster events of a similar nature;
- The actual or anticipated requests for assistance, such as a Presidential Emergency Declaration or a Major Disaster Declaration from the Governor of Puerto Rico;
- Reports from FEMA Region 2's Hurricane Program Manager (HPM), who is deployed as a liaison to the National Hurricane Center in Miami 96 to 48 hours pre-landfall.

3.2.2 Private-Sector Coordination Requirements

Region 2's Private Sector Liaison (PSL) in conjunction with ESF #14 and the Cybersecurity and Infrastructure Security Agency (CISA) will serve as the primary liaison between FEMA and the private-sector stakeholders in Puerto Rico. The PSL will:

- Reach out to and communicate with the Commonwealth's emergency management partners as well as its Chamber of Commerce, industry associations, large employers, and academia to support priorities and objectives for private-sector resiliency and business continuity.
- Identify private-sector resources and capabilities before, during, and after a disaster to support response operations and regional planning efforts.
- Coordinate with FEMA Headquarters' Office of Response and Recovery (ORR), Office of Business, Industry, and Infrastructure Integration (OB3I), the National Business Emergency Operations Center (NBEOC), and other federal agencies in support of private-sector integration, the stabilization of the Lifelines, and the continuous operation of critical business and government functions.

3.2.3 Information Collection

Personnel in the Regional Watch, Planning Section (when activated), Liaison Officers (LNOs), and supporting TAU will develop and use Essential Elements of Information (EEIs) and Regional Administrator-directed Critical Information Requirements (CIR) to guide information gathering and intelligence production. EEIs and CIRs are developed in conjunction with Regional leadership and are included in Regional deliberate and incident-specific plans. Threat Supplement to this annex focuses on hurricane and/or hurricane-specific incident CIRs and EEIs.

3.2.4 Sources of Information

The Planning Section of the Regional Watch and other sources provide critical information about hurricanes. Table 4 contains sources to obtain required information for analysis and dissemination.

Table 4: Resources for the Response to a Hurricane

Source	Products	Scope
National Hurricane Center (NHC)	Tropical Weather Outlooks Tropical Cyclone Advisory Packages	Tropical weather outlooks give the locations for the formation and the probabilities of a potential tropical cyclone. Advisory packages for active storms include official text and graphics that forecast the track and intensity of the storm, public advisories, discussions of the forecasts, wind speed probabilities, storm surge forecasts, and other information every six hours. Intermediate and special advisories are issued when they are required. Link: https://www.nhc.noaa.gov/
NWS Weather Prediction Center (WPC)	Quantitative Precipitation Forecast (QPF)	Graphics display the expected cumulative rainfall in the United States for periods up to seven days. Link: https://www.wpc.ncep.noaa.gov/qpf/qpf2.shtml
NWS Local Weather Forecast Offices (WFO)	Local Statements about the Hurricane	The WFO provides an overview of a storm's local effects, including expected weather conditions, decisions on evacuations made by municipal officials, and the precautions taken to protect life and property. San Juan WFO Link: https://www.weather.gov/sju/
Hurricane Evacuation Study (HES)	Technical Data Report	The HES provides technical information about areas vulnerable to a hurricane's hazards, designated hurricane evacuation zones, population and infrastructure vulnerabilities, behavioral findings, and assessments of shelter capabilities as well as traffic management and other transportation factors for an evacuation. This information is available in Hurrevac. Link: https://hvx.hurrevac.com/hvx/
Hurrevac (HVX)	Web-Based Platform	HVX provides geospatial tracking of tropical cyclones, forecasts, and a decision-support platform for evacuations that combines live feeds of NHC and NWS forecasts with the clearance times for evacuations to assist emergency managers in determining the deadline for a decision about evacuations and the expected impacts of the storm. Link: https://hvx.hurrevac.com/hvx/
Hazards U.S. (HAZUS)	Combined Hurricane and Flood Modelling	HAZUS is a geospatial modeling tool that estimates the potential losses and the physical, economic, and social impacts of a disaster. Graphics illustrate the limits of the identified high-risk locations. HAZUS estimates the damages to and the loss of buildings, essential facilities, the costs of repairing them, the quantity of debris, and the requirements for shelters as well as the loss of use and the direct costs associated with the loss of function, such as the loss of business revenue. Link: https://www.fema.gov/hazus

3.3 Concept of Operations

The Puerto Rico Emergency Management Bureau (PREMB) and FEMA Region 2 provide operational support to affected municipalities within the Commonwealth by deploying resources and capabilities in a timely manner to support a successful response and save and sustain lives and prevent human suffering.

Local Offices of Municipal Emergency Management (known as OMMEs in PR) request resources by submitting a PR Form-213 Request for Assistance (RFA) to PREMB who will either fulfill the requirement from Commonwealth capabilities, including Emergency Management Assistance Compacts (EMAC), or request FEMA capabilities or resources by submitting a Resource Request Form to FEMA. Once approved, FEMA either uses agency inventory, processes procurement actions, or issues a Mission Assignment (MA) to another federal agency with the required capability.

The designed annex establishes a coordinated framework for the regional support of the initial federal resource push[2] model in in response to the pre-planned trigger point for a Category 4 Hurricane impacting the Commonwealth and the anticipated needs. The established framework also supports the delegation of the authority for the response to Region 2 and the transition to a resource pull model, based on actual needs (Figure 2). This framework describes the necessary integration and synchronization of the Federal Government and the stakeholders on the Commonwealth to support the delivery of the defined Core Capabilities through mission-essential tasks that support the objectives and goals of the response by pairing these with the assets needed to accomplish the mission.

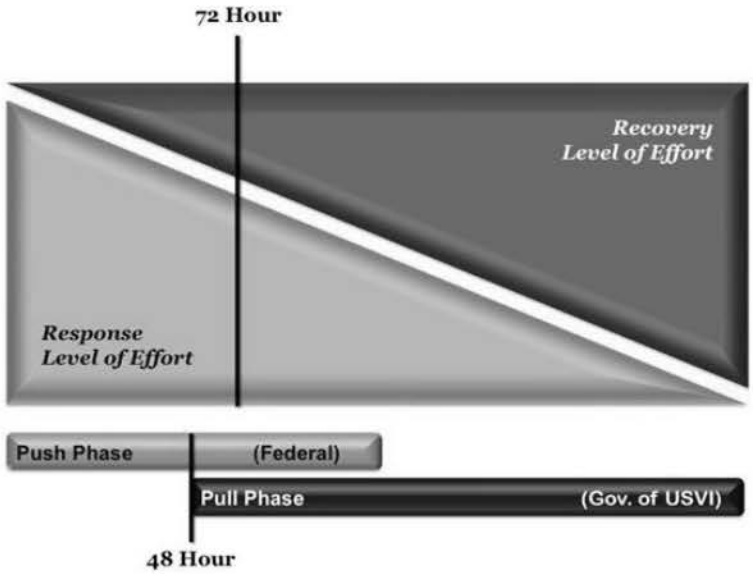

Figure 2: The Push-Pull Framework

In addition to the push/pull logistics concepts, a phased approach to the response,[3] will be used. This will be organized in three phases:

[2] The Federal Response to Hurricane Katrina: Lessons Learned, THE Government Accounting Office, February 2006
[3] Regional Planning Guide, Department of Homeland Security and the Federal Emergency Management Agency, Second Edition, 2010

- Phase 1 (Pre-Incident – Normal Operations) includes activities that take place before an incident to support or enhance planning and preparation efforts.
- Phase 2 (Response) begins at the validation of the event and ends with the demobilization of lifesaving operations, the downsizing of response operations, and the initiation of the transition to Recovery.
- Phase 3 (Recovery and Restoration Operations) is not addressed in the Caribbean AHP. Information about Phase 3 can be found in the National Disaster Recovery Framework for Long-Term Recovery.

Table 5: Operational Phases of the Response and the Recovery

Phase 1			Phase 2			Phase 3		
Pre-Incident Operations (Planning, Preparation, and Mitigation Activities)			Post-Incident Operations			Recovery and Restoration Operations		
1a	1b	1c	2a	2b	2c	3a	3b	3c
Monitor Threat	Elevated Threat	Credible Threat	Immediate Response	Community Stabilization	Sustained Operations	JFO Program Delivery	Long-Term Recovery Operations	Regional Closeout

3.3.1 Phase 1: Pre-Incident Operations

Phase 1 covers all pre-incident operations, including steady-state emergency management activities before potential threats can be identified and actions taken in advance of the hurricane's impacts.

- Phase 1a is associated with steady-state operations, in which FEMA Region 2 continuously monitors available sources to get information about threats that might have an impact on the Region 2 Caribbean Area. Other steady-state emergency management activities focus on normal preparedness and hazard mitigation.
- Phase 1b is associated with the increased likelihood or the elevated threat of natural hazards and the development of Situational Awareness. Pre-selected teams are placed on alert and could be activated.
- Phase 1c is associated with the near certainty of natural hazards or credible manmade threats. Resources are pre-positioned in anticipation of Caribbean support requirements.

Notice Event:
Due to the nature of notice incidents, assessment and response is deliberate. An example of this type of event would be a tropical storm/hurricane. In accordance the operational phase approach, there is time allotted for pre-incident planning (phases 1A-1C). The execution checklist for this type of event is listed in the Caribbean All-Hazards Plan (Annex X: Execution Checklist) and WebEOC.
Search: WebEOC – Menus - Libraries - Execution Checklist Library

3.3.2 Phase 2: Post-Incident Operations

Phase 2 focuses on an immediate Federal response to save lives and support survivors, their communities, and the affected government following a disaster. Phase 2 begins as soon as a hurricane strikes Puerto Rico.

- Phase 2a begins at the time of the incident in conjunction with notification from the NWS and NHC. Initial actions include the deployment/employment of resources and capabilities throughout the islands to support known resource requirements for Commonwealth and municipal lifesaving operations. Resources will deploy simultaneously to one or more ISBs to conduct Reception, Staging, Onward movement, and Integration (RSOI), provide just-in-time training, and build toward providing stability based on Commonwealth-identified priorities and situational awareness. Targeted life-sustaining and assessment of critical infrastructure will be initiated within the impacted area to establish infrastructure for tactical response. Subsequently, air, ground, and maritime avenues of approach will be assessed to evaluate operational and logistic capabilities. Tactical ground, air and maritime main supply routes will be established to facilitate operations and fulfill logistical support requirements, based on the Commonwealth's priorities, objectives, and situational assessment.

- Phase 2b begins with the establishment of an IOF in the Commonwealth. Priorities for this phase include rapidly assessing and repairing critical infrastructure to expand support capabilities for the impacted population, based on Commonwealth priorities. Staging area operations will be expanded throughout the impacted area. Additional responders, assessment & repair teams, and other life-sustaining resources will be deployed to increase access. All levels of support should expand throughout the impacted area. Response emphasis will initially focus on population centers and survivor collection points, and will expand as the situation, infrastructure, and capabilities allow.

The distribution of commodities in Puerto Rico is through nine regional staging areas.

- Federally supplied commodities enter through San Juan, the primary point of ingress.
- They will be delivered to the Caribbean Distribution Centers, one in Caguas and one in Ponce.
- They will be taken to the staging areas by the Government of Puerto Rico and distributed to the PODs of its municipalities.

PREMB will send a request for the quantities and types of commodities needed at the PODs to the Puerto Rico EOC. The EOC will forward the request to the IOF or the JFO, which will direct logistical execution to either acquire or release the requested commodities.

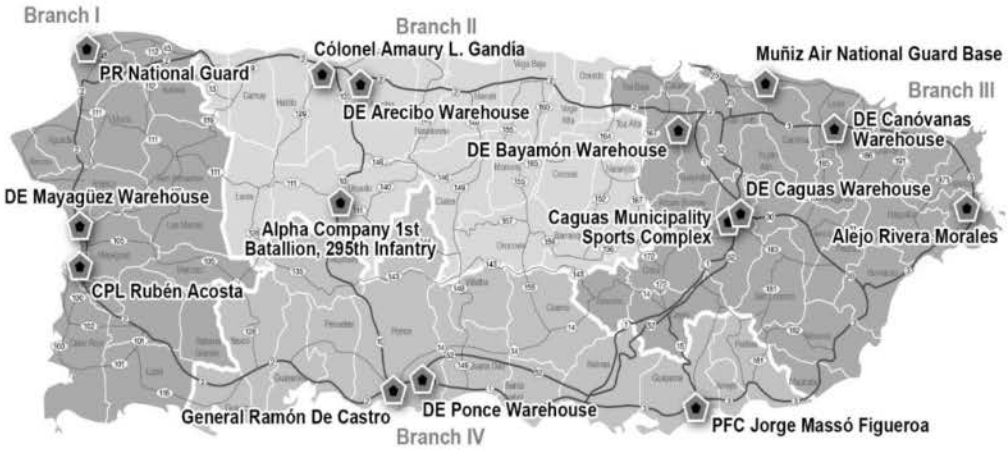

Figure 3: The Locations of Resource Staging Areas in Puerto Rico[4]

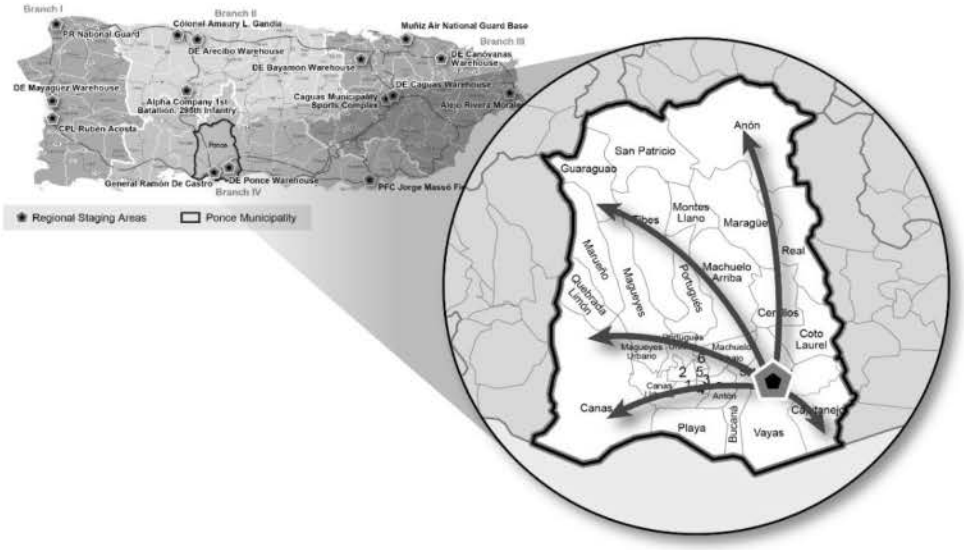

Figure 4: The Movement of Commodities from a Staging Area to a Point of Distribution

The graphic image in Figure 4 is not based on a scenario. It depicts a hypothetical response, the intent of which is to demonstrate the process, including the possible potential failures that may arise due to the infrastructures impacts from the hurricane.

- Phase 2c begins with the completion of lifesaving operations. The priorities for Phase 2c are to begin the transition from a life-sustaining tactical response and short-term recovery operations and to setting the stage for long-term recovery. According to the Commonwealth's priorities, essential public services will be expanded to include the provision of food, water, power, fuel, communications services, more transportation routes and modes, and the relocation and long-term shelter options for survivors displaced by the incident.

  In Phase 2c temporary and permanent restoration efforts will be expanded. The continued stabilization of the critical infrastructure associated with sustained response operations and

[4] As of February 2020

intermediate recovery and mitigation will also be expanded. Restoration and stabilization efforts will include the delivery of Stafford Act programs, the completion of a Recovery Support Strategy, the provision of accessible interim housing, the making of plans for the immediate infrastructure repair, and the restoration of private-sector CIKR.

3.3.3 Phase 3: Recovery and Restoration Operations

Phase 3 refers to recovery activities that occur as a part of the Response mission area to facilitate the transition and support to the Recovery mission area. Phase 3 includes short-term recovery operations (e.g., the repopulation of the affected area) and long-term recovery operations (e.g., the transition to ongoing recovery and mitigation activities).

- Phase 3 begins with support for the Commonwealth and its municipalities as well as the private-sector entities in which federal are engaged to restore services, continue governmental operations, and promote economic recovery. All lifesaving activities have been completed, and the groundwork has been laid to support long-term recovery by assisting individuals, restoring critical infrastructures, and essential governmental and commercial services. Phase 3 will overlap with Phase 2. This phase will not be addressed in the Caribbean AHP. Information about long-term recovery operations can be found in the National Disaster Recovery Framework (NDRF).

3.4 Community Lifelines

Community Lifelines are indispensable services that enable the continuous operation of critical business and governmental functions and the sustainment of life. If these services were compromised and not properly secured and stabilized, human health and safety or national economic security would be at risk. A careful analysis of the status of the Lifelines is essential for an effective response to an incident. The Lifeline Stabilization Cycle provides a framework for integrating the Lifelines into response operations by using a five-step process.

Figure 5: Locations of Resource Staging

1. Assess the stabilization of the Lifelines based on the impacts of the incident.
2. Identify interdependencies among the Lifelines and set priorities for the employment of resources.
3. Identify the limiting factors and resource gaps based on the way that these resources are aligned.
4. Develop and implement courses of action with the corresponding requirements for resources as soon as this analysis has been completed.
5. Reassess the direction or stay the course based on lessons learned, updated assessments, and conditions on the ground.

Focusing on the stabilization of lifelines is a priority for all levels on emergency management. Accomplishing stabilization will better align Emergency Support Functions, Sector-Specific Agencies, and critical private sector partners to provide national unity of effort for planning, reporting, responding to, and recovering from disasters. Long-term recovery and a return to normalcy cannot occur until each lifeline end state is achieved. The seven (7) community lifelines are Safety and Security, Food, Water, Sheltering; Health and Medical; Energy (Power and Fuel); Communications; Transportation and Hazardous Materials.

3.4.1 Lifeline – Safety and Security

Collapsed structures, storm surge, debris, and downed trees and power lines will require search and rescue and firefighting support. Damages in the affected area and the cascading impacts of the hurricane on essential services and critical infrastructures will cause panic and fear among the survivors.

The evacuation and the protection of the affected population is a component of the Safety and Security Lifeline. Federal support for mass evacuations will be provided at the Commonwealth or the municipal level and scaled to the incident. Due to the unique geography of the Commonwealth, evacuating the survivors will be challenging.

Survivors should shelter in place. Evacuees with private transportation, including evacuees with disabilities and access and functional needs, should go to the shelter designated by the Commonwealth's authorities. Evacuees will be triaged and registered in a tracking system by the Red Cross or the Department of Defense. Federal support for self-evacuees might include supporting the Commonwealth's congregate-care efforts. Federal support might also be needed to assist survivors in non-traditional shelters, who are unwilling or unable to return to their home.

As soon as the Commonwealth's authorities determine that evacuees can safely return to their home and that vital infrastructure has been restored, federal responders will begin to support the return of evacuees who need assistance with transportation to the affected area.

- **Law Enforcement and Security:** Police stations are expected to have greater than 50% damage. Additional damage is expected at prisons, which could require the employment of additional law enforcement officers. Federal Law Enforcement Officers (FLEO) will be sent to Puerto Rico if the Commonwealth asks for them.
- **Fire Service:** The hurricane will cause 100 structural fires.
- **Search and Rescue:** Collapsed structures, storm surge, debris, and downed trees and power lines will require search and rescue and firefighting support. Damages in the impacted area and the cascading impacts on essential services and critical infrastructure will cause panic and fear among the survivors. USAR elements (Type 3 Teams with 35 pax each) will be deployed to the Commonwealth and staged in anticipation of requests for assistance. USAR Incident Support Teams will coordinate with the IMAT to get security support with the Quick Response Team (QRT).

- **Government Service:** Municipal governments will be open or closed depending on impacts from the event. ESF #11 will monitor requests for assistance and work to identify the impacts of the hurricane on natural and cultural resources. The Heritage Emergency National Task Force will collaborate with the Crowdsourcing Team of the NRCC to identify the impacts on historic and cultural resources.
- **Community Service:** An Infrastructure Assessment Team will be sent to the Initial Operating Facility (IOF). USACE will provide technical assistance to local inspectors on the impact of the hurricane on dams.

3.4.2 Lifeline – Food, Water, Shelter

A hurricane will make estimating shortages of critical resources, including commodities, food, water, trained personnel, sheltering, and warehousing, much more difficult.

- **Food:** Many large grocery stores will be forced to operate on generator power, if they are even open. The reopening of grocery stores could be delayed until they can restock and repair structural damage. The delivery of food to the PODs, which will require the rapid development of a supply chain, will support the displaced population during the stabilization of the incident, if local food markets are closed.
- **Water:** Disruptions in water services are likely because of power outages. Tanker trucks will be on standby to transport water from FEMA's warehouse, if the Commonwealth requests such support.
- **Shelter:** Strategically placed shelters for 12,000 survivors will be needed. Due to cultural norms in the Commonwealth, a family unit may include extended family members and members of the community. Therefore, larger tents might be necessary. Non-traditional shelters will also be a needed for survivors who may be afraid to return home, even if it is safe to do so.
  - The Red Cross will distribute comfort kits.
  - Teams from the Puerto Rico Administration of Mental Health and Anti-Addiction Services (la Administración de Servicios de Salud Mental y Contra la Adicción [ASSMCA]) will be deployed to provide mental health, spiritual care, and casework services and to assess the damages.
- **Agriculture:** 1% of the population is employed in the agriculture sector. Due to land subsidence and inundation, the output of this sector could be reduced for up to a year after the hurricane.

3.4.3 Lifeline – Health and Medical

Because of damage to the electric grid and the resulting loss of power, an increase in diseases from a lack of sanitation, increased demands on the healthcare system, and the loss of medical facilities is likely to occur in the impact area. Portable dialysis units might be required for patients who cannot be evacuated to Puerto Rico or CONUS. Many hospitals will have to rely on generator power.

- **Medical Care:** Twenty healthcare facilities are expected to experience greater than 50% damage. 6,000 survivors will require hospitalization.

  Disaster Medical Assistance Teams (DMAT) will be on call. A liaison from the Assistant Secretary for Preparedness and Response (ASPR) will be sent to Puerto Rico. The Office of Resource Management (ORM) will identify the available DMAT Caches in CONUS for use by the DMAT, if requested. An HHS liaison will report to the Commonwealth's JFO as soon as it has been established.

- **Patient Movement:** Pressure on the healthcare system and the closure of medical facilities are likely in the affected area. The evacuation of medical facilities might have to be ordered. Federal support through the FEMA's National Emergency Medical Services Contract might be needed. The National Ambulance Contract might be needed to sell vehicles to FEMA for OCONUS activities.

- **Public Health:** The impacts of the hurricane on the survivors will include more than physical injuries. Therefore, the psychological impact of the disaster will have to be deployed to counteract the stigma that could be associated with seeking such help.

- **Fatality Management:** 11,375 fatalities are expected. Disaster Mortuary Operational Response Teams (DMORT) will be deployed to assist in the management of human remains.

- **Medical Supply Chain:** Approximately, 22% of United States pharmaceutical exports are manufactured in Puerto Rico. Destabilization of the facilities and ports of departure will have cascading impacts to other medical facilities.

3.4.4 Lifeline – Energy (Power and Fuel)

Power outages and interruptions in the fuel supply and the networks for transmitting and distributing it are likely to occur throughout the Commonwealth.

- **Power:** There are 22 electrical power facilities in Puerto Rico, 54% of which are in its southern region. A power outage across the entire Commonwealth, with considerable damage to the electric grid, including both the transmission and the distribution systems, is expected. The outage, which could be caused by the hurricane, but might be exacerbated by a steady-

state system already at risk. The average age of power plants owned by the Puerto Rico Electric and Power Authority (PREPA) is 41 years. Plants that burn residual fuel oil are limited in capacity as they must comply with the Mercury and Air Toxic Standards (MATS), the Consent Decree of the EPA, and obtain other environmental permits.

As of February 2020, the Costa Sur power plant, which produces 400 megawatts of the Commonwealth's electricity, will be out of operation until the summer of 2021. The remaining plants have increased their capacity to make up for the shortfall. It is likely that additional plants might have to be taken offline because of surges in the distribution lines for electricity that will reduce their output even more. FEMA will support the mobilization of Temporary Power Teams and the deployment of Department of Energy (DOE) personnel for status assessments, reporting, and needs assessments.

- **Fuel:** Puerto Rico has no petroleum, natural gas, or coal production and refining operations. Fuel will be needed for as many as 1,000 generators, which have a potential burn rate of more than 100,000 gallons of fuel per day for up to 60 days. Therefore, an interruption of the fuel supply and its distribution network is expected.

3.4.5 Lifeline – Communications

Communications nodes, including landline and cellular services in the impacted area, are likely to be overloaded or damaged. Outages due to a loss of commercial power are likely, resulting in a heavy reliance on generator support.

- **Infrastructure:** Communications nodes in the impacted areas are likely to be overloaded and damaged. Cellular and landline components in the areas of impact are susceptible to damage. Extended power outages will limit use of the internet, cell phones, and non-battery radios. Outages are likely to be tied to loss of commercial power resulting in a heavy reliance on generator support. Assessments may be needed in more remote areas of the island. Access to sites for assessment, fueling, repair and watering may be an issue for sites on generator power.
- **Responder Communications:** Because Situational Awareness will be difficult to obtain and disseminate, building a Common Operating Picture and coordinating response efforts will be challenging. These challenges will complicate efforts to deploy and employ resources effectively; however, Federal responders will have access to satellite telephones and point-to-point systems to ensure effective communications throughout the response.
- **Alerts, Warnings, and Messages:** The capacity and the capability of the Commonwealth's municipalities to communicate with the affected population will be a major concern, especially if more evacuations are required. IMAT Communications Specialists, Mobile Emergency Response Support (MERS) Teams, and necessary equipment will deploy to these remote locations if conditions permit. Satellite equipment will be activated, and FEMA radio networks assessments will be undertaken. Spanish speaking community relations specialists will also be deployed.

- **911 & Dispatch:** Survivors in areas where telecommunications services are not available will not be able to call 911.
- **Financial Services:** Financial institutions will be affected by the hurricane. Because of power outages, the banking system will not be able to dispense cash from automated teller machines. Infrastructure damage will impact the banks, and power outages will limit the ability of the survivors to use their credit and debit cards.

3.4.6 Lifeline – Transportation

Landslides, floods, accumulated debris, and downed trees and power lines will challenge post-incident response operations by limiting the capacity of highways, roadways, and airports.

- **Highways and Roadways:** Thousands of tons of debris will be generated, which will block more of the already obstructed highways and roadways, limiting the transport of durable goods and commodities to the areas of impact. At least 5.073 miles of road will be affected by the hurricane.
- **Mass Transit:** Bus inventory in the San Juan metropolitan area is expected to be reduced due to initial impacts. Bus stations in the San Juan metropolitan area could sustain impacts. Bus services will be suspended pending power and roadway status.
- **Railway:** Railway service expected to be partially impacted, but the effects will be limited to the San Juan metropolitan area. Evaluations will be conducted to establish timelines to reopen
- **Aviation:** San Juan Airport will likely be partially operational within first 3 days, unless the storm takes unusual track allowing for a direct strike. The first secondary airports opened will be on the north and west side of the islands, followed by those on the south and east side.
- **Maritime:** All seaports will remain closed for the first three days. Then seaports that were not directly affected by the hurricane will reopen. Seaports that were directly affected might be closed for 90 days or longer to clear debris and hazardous materials. Closures or restrictions to daylight hours could occur. A side-scanning sonar unit will be deployed by USACE to support clearing the seaports by the United States Coast Guard (USCG). The USCG will assess the impact of the hurricane on the seaports as soon as possible – conditions permitting. Ferry services to Culebra and Vieques are likely to be interrupted by the effects of the hurricane. These services will not be restored until an assessment of the seaports that they use can be completed.

3.4.7 Lifeline – Hazardous Materials

Concerns about environmental and hazardous materials include an outbreak of diseases caused by the contamination from flooding and the leaching of toxins (e.g., untreated wastewater, chemicals, petroleum products). Wastewater systems might have to be shut down because of the loss of power or damage to the infrastructure.

- **Facilities:** The Commonwealth has 109 chemical manufacturing facilities, 12 landfills, 33 waste management facilities, and 51 wastewater treatment facilities that may be impacted by the incident. Most have primary and secondary containment systems.
- **Hazardous Materials, Pollutants, Contaminants:** Puerto Rico's 310 toxic release inventory sites could contaminate potable water systems and cause environmental impacts to the native species on the island.

3.5 Key Decisions and Actions

The key decisions that must be made by the Regional Administrator (RA) during the response to a catastrophic hurricane that strikes Puerto Rico will include but are not limited to:

- The activation and staffing of the Regional Response Coordination Center (RRCC);
- The expediting of a recommendations to the President for an Emergency or a Major Disaster Declaration for a catastrophic hurricane in Puerto Rico;
- The adjudication of resources among FEMA Region 2's jurisdictions, if applicable; and
- The transfer of operations from the RRCC and the NRCC to the Joint Field Office (JFO).

4 Administration Resources and Funding

Information on Administration, Resources, and Funding is outlined in the Caribbean AHP Base Plan. Region 2 will use surge funding to support the initial notice push for a hurricane.

5 Oversight and Coordinating Instructions

This annex complements the Caribbean All-Hazards Plan and mirrors the USVI Hurricane Annex (Annex I). The Caribbean AHP, using the Community Lifelines framework, gives whole-community partners the information and resources they need to understand the Community Lifelines, to coordinate with partners using the Lifelines, to offer basic guidance on how to implement the Community Lifeline Construct during the response to an incident, and to serve as a guide for how to deliver the Core Capabilities through the 17 standard Lines of Effort, which will stabilize the Lifelines. Region 2 has developed additional Lines of Effort to further stabilize the Lifelines. This annex addresses a problem-set in a scenario agnostic fashion. Because this annex addresses a specific type of incident, operational information about the incident begins in Phase 1. Further details about Oversight and Coordinating Instructions can be found in the CAHP.

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Appendix G-1: Lifeline – Safety and Security

1 Introduction

The Safety and Security Community Lifeline includes the public-safety requirements for achieving effective first-response capabilities, such as search and rescue, police, and firefighting services. It also supports the effective communication of public protection orders, such as an evacuation order from officials with the statutory authority to reduce the exposure of survivors to the effects of a hurricane. Such support includes fuel, comfort stations, and shelter commodities. Commonwealth and municipal officials are responsible for evacuations and for issuing evacuation notifications. The Commonwealth or municipalities may have varying policies or protocols regarding recommendations for issuing evacuating orders, as well as coordination within their own government and FEMA for the affected population.

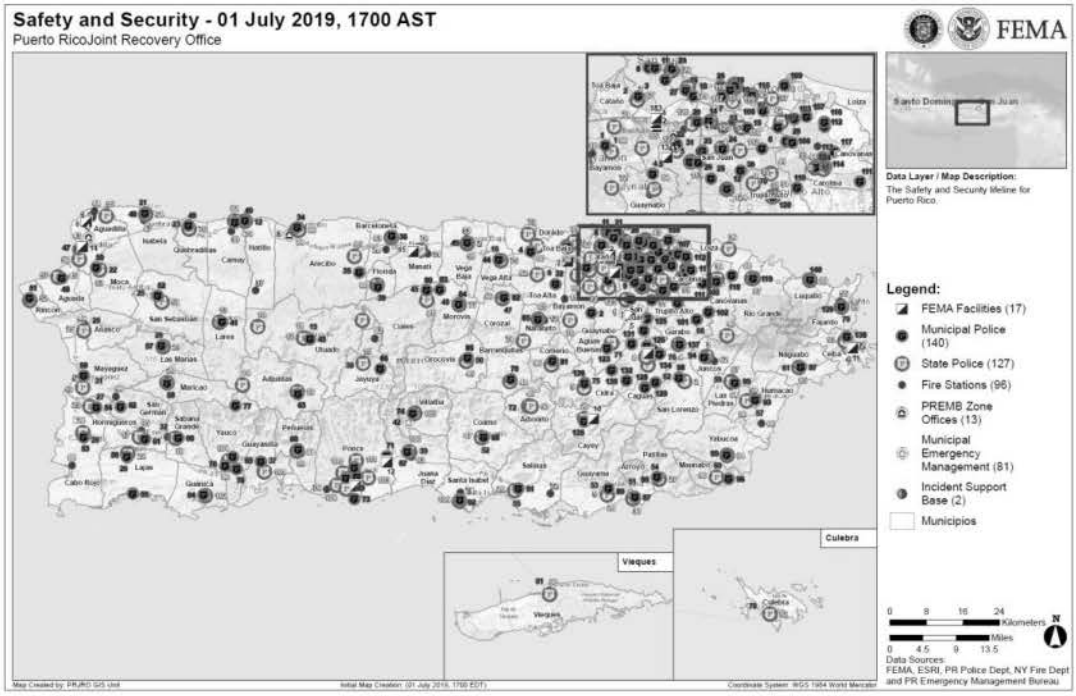

Figure 1: The Locations of Law Enforcement and Firefighting Services

2 Impacts

The initial impacts of a hurricane and its cascading effects on communications, financial services, food, and water services, and rumored or actual unlawful activities (i.e., theft and looting), will cause panic and fear among the survivors. Law enforcement officers will need to mitigate panic and fear as much as possible and establish a robust law enforcement presence.

Table 1: Impacts on the Safety and Security Lifeline

Lifeline Component	Impact
Police Stations	▪ Police Stations are likely to have higher than 50% damage. Because prisons will be damaged, more law enforcement officers will be required. FLEOs will be routed to Puerto Rico, if the Commonwealth asks for additional support.
Fire Stations	▪ 10 fire stations will be damaged, 5 of which will suffer higher than 50% damage. ▪ There will be 100 structural fires.
Emergency Operations Centers	▪ Even though Emergency Operation Centers and Public Safety Answering Points (PSAP) will not be damaged, QRT and security personnel will have to be activated to protect the first responders.
Local Search and Rescue	▪ Population in affected area: 3,500,000. ▪ Persons requiring rescue: 1,000.
Protective Actions	▪ Populations in the affected area: ▪ Evacuees: 39,000 persons who have been displaced. ▪ Shelterees: 12,000.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the CAHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-1.

Efforts are focused on ensuring a safe and secure environment for impacted communities and responders while protecting essential resources and infrastructure. Priorities of effort are to alert and mobilize the necessary security, law enforcement and contract personnel to support the Commonwealth and the Federal Government response priorities and complete security assessments. This includes:

- Employing resources to support the first lifesaving efforts;
- Securing essential facilities and protecting responders and their equipment;
- Supporting the Commonwealth's law-enforcement officers; and
- Deploying correction officers and supporting the evacuation of the affected correctional facilities, on request.

Table 2: Critical Tasks for the Evacuation and Protection of the Affected Population

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local, territorial partners
Phase 1b	▪ Activate Federal law enforcement resources for deployment to and employment in the affected area ▪ Alert and deploy ESF-13 QRT
Phase 1c	▪ Plan for the use of safety and security personnel from all levels of government in support of safety and security efforts relative to the well-being of survivors and responders during an incident ▪ Coordinate with local Law Enforcement and Emergency Management officials to identify and prioritize access control procedures with response partners. Establish badging and credentialing requirements for incoming responders
Phase 2a	▪ Coordinate with the Commonwealth to determine the extent of the self-evacuated population and the need to conduct further evacuations ▪ Assess the public safety infrastructure to include fire, law enforcement, and EMS stations and personnel ▪ Identify public safety shortfalls and mission assignment assistance from Federal law enforcement agencies, USCG, and/or DOD through ESF 13 ▪ Surge existing contract support for security personnel through MA process ▪ Coordinate with Defense Coordinating Element (DCE) to facilitate requests/volunteered support for/from CONUS based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate) ▪ Coordinate with ESF 15 to develop and disseminate effective messaging ▪ Voluntary agency liaison will coordinate with the Commonwealth to identify voluntary organization active in disasters (VOAD) or community groups which may be able to assist and supplement formal security personnel
Phase 2b	▪ Continue to source and deploy firefighting, EMS, and law-enforcement assets in support of the requests and based on the needs of the Commonwealth
Phase 2c	▪ Begin to incorporate considerations for the Recovery in the operations of the Commonwealth's EOC. ▪ Continue to source and deploy firefighting, EMS, and law-enforcement assets in support of the requests and based on the needs of the Commonwealth

Table 3: Critical Tasks for Responder Safety

Phase	Critical Tasks
Phase 1a	▪ Coordinate concerns for the health and safety and the occupational safety of the responders. ▪ Synchronize planning, training, and exercising, after-action reviews, and corrective action plans with the Commonwealth and its municipalities.
Phase 1b	▪ Activate federal law-enforcement resources to be deployed to and employed in the affected area. ▪ Alert and deploy ESF #13's QRT.
Phase 1c	▪ Plan for the use of safety and security personnel from all levels of government to support safety and security efforts for the well-being of survivors and responders during an incident. ▪ Coordinate with local law-enforcement and emergency-management officials as well as their response partners to identify and set the priorities for access-control, including badging and credentialing, for incoming responders.
Phase 2a	▪ Establish operational security and fire protection for all the traditional and atypical responders who are engaged in lifesaving and life-sustaining operations. ▪ Coordinate with the Government of Puerto Rico a strategy for the deployment and the use of staffers and resources (i.e., their numbers, locations, and transport needs). ▪ Coordinate with DCE to facilitate requests/volunteered support for/from CONUS based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate). ▪ Institute a phased deployment plan and source fire, EMS, and law enforcement assets based on the assessed needs. ▪ Assess the condition of the EOC.

Phase	Critical Tasks
	▪ Activate COOP, as necessary. ▪ Source and deploy supplemental staffers through ESF #5, as needed.
Phase 2b	▪ Source and deploy subject matter experts (SME) (e.g., representatives from the U.S. Geological Survey [USGS], the Puerto Rico Seismic Network) to staff and support the EOCs, as necessary. ▪ Continue to source and deploy these assets in support of the requests and based on the needs of the Commonwealth.
Phase 2c	▪ Begin to incorporate recovery considerations in the operations of the EOCs. ▪ Continue to source and deploy these assets in support of the requests and based on the needs of the Commonwealth.

Critical Tasks for Law Enforcement and Security

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training, and exercising as well as after-action reviews and corrective action plans with local partners
Phase 1b and 1c	▪ Coordinate with stakeholders and maintain Situational Awareness of their available resources, including personnel to assist in public safety and security efforts ▪ Activate a headquarters-level ESF #13 coordinator for Federal law-enforcement operations
Phase 2a	▪ Assess law enforcement capabilities and provide situational awareness for determining operational objectives driven by the consequences of the hurricane ▪ Source and deploy ESF 13 to assess need and begin sourcing law enforcement personnel ▪ Surge existing contract support for security personnel through MA process ▪ Establish security operations for all traditional and atypical response personnel engaged in lifesaving and life-sustaining operations ▪ Coordinate with the Government of the Commonwealth for the deployment and utilization strategy of personnel and resources (numbers, locations, transport, etc.) ▪ Coordinate with DCE to facilitate requests/volunteered support for/from CONUS based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate) ▪ Institute phased deployment plan and source law enforcement assets based upon assessed needs
Phase 2b	▪ Identify public safety shortfalls and mission assignment assistance from Federal law enforcement agencies, USCG, and/or DOD through ESF 13 ▪ Continue sourcing assets and deployment of law enforcement assets based phased deployment plan/needs
Phase 2c	▪ Continue sourcing assets and deployment of law enforcement assets in support of the Commonwealth's requested demand/needs ▪ Establish and implement ESF 13 working group plans for supporting displaced prison populations

Table 4: Critical Tasks for Firefighting

Phase	Critical Task(s)
Phase 1a	▪ Provide contact with appropriate fire service organizations/associations at the national level to ensure any actions by these organizations relative to disaster planning, preparedness or response are coordinated with the ESF #4 primary agency and other appropriate support agencies ▪ Additional planning, training, and exercises have been conducted in coordination with local, Federal entities
Phase 1b and 1c	▪ Alert and place on stand-by a Type 1 IMT
Phase 2a	▪ Assess and establish adequate supplemental firefighting assistance required ▪ Coordinate with ESF-4 to provide required support and assistance ▪ Mobilize additional firefighting and EMS resources through the National Interagency Fire Center (NIFC) or the National Interagency Coordination Center (NICC), and the Geographic Area Coordination Center (GACC)

Phase	Critical Task(s)
Phase 2b	▪ Continue sourcing and deploying firefighting assets in support of the requests and based on the needs of the Commonwealth
Phase 2c	▪ Continue sourcing and deploying firefighting assets in support of the requests and based on the needs of the Commonwealth

Table 5: Critical Tasks for Search and Rescue

Phase	Critical Task(s)
Phase 1a	▪ Evaluate the state of operational readiness of Commonwealth SAR resources by assessing personnel training and inventorying deployable assets ▪ Ensure Commonwealth Search and Rescue (SAR) resources are available for activation ▪ Ensure that an adequate number of technical specialists required for support are rostered, trained, and available for deployment
Phase 1b and 1c	▪ Pre-deploy the Commonwealth's SAR resources ▪ Pre-deploy the Federal Government's SAR resources
Phase 2a	▪ Assess the need for SAR operations (e.g., urban search and rescue, high and low angle rope rescue, trench rescue, swift water rescue) ▪ Source and deploy the required personnel and their special equipment through ESF #9 ▪ Source, deploy, and support a QRT for ESF #9's deployed personnel ▪ Coordinate with FEMA's International Affairs Division to source international support through the United States Agency for International Development (USAID), if necessary
Phase 2b	▪ Continue sourcing and deploying search and rescue assets in support of the requests and based on the needs of the Commonwealth
Phase 2c	▪ Continue sourcing and deploying search and rescue assets in support of the requests and based on the needs of the Commonwealth

Table 6: Critical Tasks for Government Services

Phase	Critical Task(s)
Phase 1a	▪ Perform site surveys and assessments to inform resource requests, conduct analysis, and determine the prioritization of infrastructure restoration ▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, Cybersecurity and Infrastructure Security Agency (CISA) coordinators, and LNOs
Phase 1b	▪ Coordinate with public and private sector infrastructure owners, operators, and partners to prioritize restoration activities, based on the degradation to essential infrastructure and the resources required to repair infrastructure
Phase 1c	▪ Coordinate with stakeholders and maintain situational awareness of their available resources to include personnel availability to assist in the public safety and security efforts ▪ Activate a headquarters-level ESF 14 and Cybersecurity and Infrastructure Security Agency (CISA) coordinators and LNOs
Phase 2a	▪ Assess the Commonwealth governments capability to fulfill essential tasks and activate COOP ▪ Recommend reassigning personnel assigned to non-essential government functions to support disaster functions (i.e. shelter/feeding operations, etc.) ▪ Coordinate with ESF 5 to provide supplemental support
Phase 2b	▪ Continue to source and deploy law-enforcement assets in support of the requests and based on the needs of the Commonwealth
Phase 2c	▪ Continue to source and deploy law-enforcement assets in support of the requests and based on the needs of the Commonwealth

4 End State and Stabilization

The stabilization of the Safety and Security Community Lifeline in the wake of a hurricane depends on the stabilization or return to service of the other Lifelines. Evacuations, search and rescue operations, and firefighting operations depend on accessible roads, tunnels, and bridges; an adequate number of vehicles; and operable communications. Ensuring the safety of the responders and maintaining calm in the affected areas depends on clear and operable public communication systems. Threats to life-safety are no longer a concern responders and survivors. The essential functions of government, including executive leadership, are now operational. Enough search rescue assets are on-scene to assist all of the survivors. Enough firefighting resources are available to support the suppression of any fires.

Table 7: The Stabilization of the Safety and Security Lifeline Components

Lifeline Component	End State	Pre-Incident Planning
Evacuation and Population Protection	▪ Public warnings and protective actions, which have been issued under the statutory authorities of the Commonwealth and its municipalities, have been communicated the affected community ▪ Whole-of-government coordination of and support for safe evacuations, adequate medical care, and a shelter or lodging with reasonable accommodations have been provided until it is safe for the survivors to return to the affected area	▪ Appropriate measures were taken to support the required evacuations, including identifying and posting evacuation routes in the wake of a tsunami ▪ ESF #15 coordinated the drafting of public protection messages with the appropriate public-affairs officials of the Commonwealth and its Municipalities
Responder Safety	▪ All responders in the incident's workforce operate safely, wear the appropriate personal protective equipment, and eliminate work related injuries, and fatalities.	▪ Field response personnel have access to the proper personal protective equipment.
Law Enforcement and Security	▪ Civil order has been maintained throughout the incident's life cycle. Law enforcement agencies in the affected area are fully capable of protecting the survivors	▪ ESF #13 engaged with the Commonwealth's law-enforcement agencies to assess the need for support post-landfall ▪ Appropriate law enforcement assets were alerted, activated, and staged
Firefighting	▪ Firefighting services in the affected area have been restored to their full capacity and capability	▪ Firefighting capabilities from non-affected areas were assessed for potential support
Search and Rescue	▪ Survivors in the affected area have been located, rescued, and transported for medical care to a shelter	▪ ESF #9's assets were staged for rapid deployment in support of SAR operations in the affected area
Government Service	▪ Some schools have been reopened ▪ Students in unopened schools have been directed to an open school	▪ Continuity plans for educational institutions were developed ▪ Mitigation activities to retrofit these institutions were pursued

5 Authorities and Potential Waivers

5.1 Authorities

Task	Authorities
Evacuation and Population Protection	▪ Commonwealth and/or municipal officials are responsible for issuing evacuation notifications and for supporting the evacuations ▪ ESF #1 – Transportation, ESF #5 – Information and Planning, ESF #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services, ESF #7 – Logistics, and ESF #15 – External Affairs will support evacuations, if requested by the Commonwealth.
Responder Safety	▪ FEMA's Safety Officer for the incident is responsible for ensuring that its federal response partners, being aware of its hazards, have the appropriate personal protective equipment (PPE).
Law Enforcement and Security	▪ The Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) of the Department of Justice (DOJ) is ESF #13's Public Safety and Security coordinator.
Firefighting	▪ The U.S. Forest Service (USFS) is ESF #4's firefighting coordinator.
Search and Rescue	▪ FEMA and the U.S. Coast Guard (USCG) are ESF #9's Search and Rescue coordinators for land, swift-water, flood-water, and open-water rescues.

5.2 Potential Waivers

In the wake of a catastrophic incident, the Governor of Puerto Rico has the authority to restore order and ensure public safety by taking the following actions:

- Requesting federal-law enforcement officers under the Emergency Law Enforcement Assistance Act, which request will be coordinated by the Attorney General or his/her designee; and
- Designating members of the National Guard based in CONUS to conduct law-enforcement activities under the control of the Commonwealth to the extent permitted by law.

Federal Law Enforcement Officers (FLEO) must have express statutory authority, including arrest authority, to enforce the Commonwealth and Municipal laws. If such authority is absent and executive authority, such as an order from the governor, is being relied upon instead, then concurrence must be granted by DOJ. ESF 13 has various degrees of law enforcement authority during a disaster based on their Commonwealth statutes.

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Appendix G-2: Lifeline – Food, Water, Shelter

1 Introduction

The Food, Water, Shelter Community Lifeline includes the infrastructures, resources, and personnel needed to coordinate and maintain the response to an incident that requires the provision of food, water, and shelter to the survivors. The Governments of the Commonwealth and its Municipalities will identify, establish, and possibly operate shelters and Points of Distribution (POD) with the support of Region 2, the Department of Agriculture (USDA), and other federal, local, private-sector, and non-governmental organizations (NGO), as well as voluntary, faith-based, and community-based organizations. The PODs will provide food, water, and essential supplies to survivors remaining in or near their home. The Region 2 CAHP includes messages to inform the public about support for PODs and shelters.

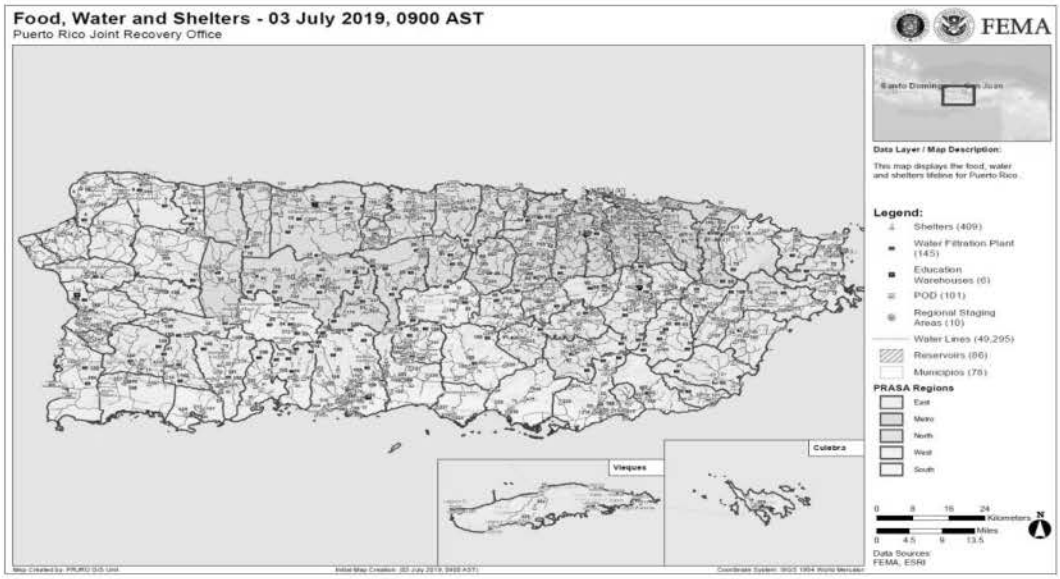

Figure 1: Points of Distribution, Water Filtration Plants, and Shelters

2 Impacts

A hurricane will make it difficult to estimate shortages of critical resources, including commodities, food, water trained personnel, sheltering, and warehousing support.

Sheltering may include organized shelters, ad hoc shelters established by community organizations, and spontaneous shelters established by the evacuees. Shelters have to be accessible to all the survivors, including persons with disabilities and access and functional needs. Historically, a higher percentage of people with disabilities and access and functional needs make up the shelter population than is represented in the general population. Supplies of

Durable Medical Equipment (DME) may need to be delivered to support shelter operations. The Region 2 Disability Integration Advisor will provide subject matter expert.

The guidance of a SME will ensure the coordination and the delivery of these resources. The Midnight National Shelter System will give the most accurate report of the number of persons in a shelter; however, the delivery of additional resources will be necessary to support the daytime population, which will be higher than the nighttime population.

Due to the impact of the incident, local first responders and volunteers may not be able to respond initially, and out-of-area assets will need to begin the immediate distribution of commodities to survivors. This may require federal assistance of commodity delivery, including the "last mile" of the delivery cycle, directly to the PODs/public. Commodity distribution to PODs need to account for day/night differences in counts as historically shelter numbers are expected to increase during the day.

Table 1: Impacts on the Food, Water, Shelter Lifeline

Lifeline Component	Impact
Programs for Food Distribution	▪ Commodities will need to be sourced for about 1,750,000 persons (50% of the population) in the affected area. 250 persons (1% of the population) will have an access or a functional need.
Supply Chain for Commercial Water	▪ Bulk Water will need to be distributed to 1,750,000 persons (50% of the population) in the affected area. 250 persons (1% of the population) will have an of access or a functional need.
Drinking Water Utilities	▪ Water utility outages will be widespread across the Commonwealth. About 1,750,000 customers (50% of the population) will be without water services.
Wastewater Systems	▪ About 1,000,000 customers (30% of the population) will be without wastewater services.
Housing	▪ The hurricane will cause 12,000 persons (about 0.68% of the population) to look for a shelter. 250 persons (about 2% of the persons looking for a shelter) will have an access or a functional need. 15,000 persons (about 1% of the population) will require temporary, non-congregate housing. 1,500 persons (about 10% of the persons requiring temporary, non-congregate housing) will have an access or a functional need. ▪ The hurricane will displace 70,000 persons (about 4% of the population), who will require long-term housing. 7,000 persons (10% of the persons requiring long-term housing) will have an access or a functional need.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix G-2.

Table 2: Critical Tasks for Commodities

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, Cybersecurity and Infrastructure Security Agency (CISA) coordinators, and LNOs

Phase	Critical Task(s)
Phase 1b and 1c	▪ Manage the supply-chain process, including the initial request for assets and commodities; orders to FEMA and its partners; transportation; inventory management at FEMA's locations; and the shipment to and receipt by the ISB ▪ Provide supply-chain management, Situational Awareness, in-transit visibility, reports on performance management, and the mapping capabilities of the Geographic Information System
Phase 2a	▪ Provide logistics support for ESF #6's federal resources ▪ Source and deploy a mass care Mission Planning Team and a Temporary Housing Task Force, which will include representatives from: • Department of Housing and Urban Development (HUD); Federal Emergency Management Agency, including the Disability Integration Coordinator; Department of Health and Human Services (HHS); American Red Cross (ARC); Association of Realtors; General Services Administration (GSA); U.S. Army Corps of Engineers (USACE); Department of Agriculture (USDA); and Occupational Safety and Health Administration (OSHA) • Send the Team and Task Force to FEMA's Personnel Mobilization Center ▪ Source and deploy 6 personnel to assess the level of need for feeding the affected population, including: • 1 Disability Integration Specialist; 1 Household Service Animal Specialist from the USDA; 1 Individual Assistance and Technical Assistance Contract (IA-TAC) Specialist; and 3 Mass Care Specialists from FEMA ▪ Identify the immediate requirements for feeding and bulk distribution, including durable medical equipment (DME), for the impacted area(s), and coordinate with Logistics to support these requirements ▪ Coordinate with the Government of the Commonwealth and its Municipalities, non-governmental organizations (NGO), and faith-based organizations to determine their capabilities and shortfalls ▪ Obtain (either through VOAD support or a contract) high-volume mobile kitchens that can serve 20,000 meals a day ▪ Source the initial response resources (IRR) BRAVO and ALPHA packages ▪ Source and deploy CAO stockpile replacements ▪ Issue a Notice of Funding Opportunity (NOFO) to fill the meal contract
Phase 2b	▪ Coordinate with each Municipality to feed the affected population, including persons with access and functional needs, household pets, and service animals ▪ Refine requirements and provide resources for the support and sustainment of scattered survivors ▪ Establish a coordinated service-delivery plan and begin moving supplies and personnel into the affected area ▪ Work through ESF #6 and ESF #7 to coordinate the delivery of meals from the distribution centers to the PODs ▪ Identify, assess, and provide food to survivors in alternative shelters
Phase 2c	▪ Priorities of effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Commonwealth and local partners to transition from emergency and short-term recovery to long-term recovery

Table 3: Critical Tasks for the Water Utilities

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, CISA coordinators, and LNOs
Phase 1b and 1c	▪ Manage the supply-chain process, including the initial request for assets and commodities; orders to FEMA and its partners; transportation; inventory management at FEMA's locations; and the shipment to and receipt by the ISB ▪ Provide supply-chain management, Situational Awareness, in-transit visibility, reports on performance management, and the mapping capabilities of the Geographic Information System

Phase	Critical Task(s)
Phase 2a	▪ Coordinate with WAPA to determine the extent of the hurricane's impact ▪ Deploy an ESF #3 team to assess the impact on any water facility infrastructure ▪ Develop priorities and determine the resources required to effect repairs ▪ Coordinate efforts with public and private resources which have a high potential for creating cascading effects post-hurricane; Assess infrastructure plan/implement prevention or mitigation activities ▪ Begin making assessments
Phase 2b	▪ Source and deploy additional technical assistance personnel from the USACE and civil engineers from the DOD ▪ Calculate the personnel, materials, and equipment now on-island as well as the additional materials needed for restoration of infrastructure, including quantities and specifications ▪ Coordinate with the Commonwealth to identify areas in need of water services ▪ Coordinate with National Guard to provide potable and non-potable water to sheltering survivors ▪ Provide temporary power to facilities offline due to energy issues ▪ Contract with the private sector to support repairs of water utilities infrastructure
Phase 2c	▪ Priorities of Effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Commonwealth and local partners to transition from emergency and short-term recovery to long-term recovery ▪ Initiate plans to provide water support for transitional sheltering ▪ Develop and implement prioritized mitigation plan based on assessments

Table 4: Critical Tasks for Sheltering and Housing

Phase	Critical Tasks
Phase 1a	▪ Identify projected shelf stable meal, water, and animal food inventories available or being sent to Resource Staging Areas (RSAs) ▪ Provide subject matter expertise, guidance, and resources to all FEMA programs and services that are integrated and fully accessible to survivors with disabilities and other individuals with access or functional needs
Phase 1b	▪ Form a sheltering task force to identify shelter capacities, including non-traditional methods of post-landfall sheltering ▪ Issue invitational orders to the ARC and request support from ESF #8 and ESF #11 ▪ Validate healthcare facility shelter-in-place and evacuation requirements. Determine how survivors will access medical facilities and potential impacts to operational status
Phase 1c	▪ ESF 6 will provide subject matter expertise, guidance and resources to all FEMA programs and services that are integrated and fully accessible to survivors with disabilities and other individuals with access or functional needs ▪ Ensure proper positioning of shelter support resources
Phase 2a	▪ Provide logistic support for ESF 6 Federal resources ▪ Source and deploy mass care Mission Planning Team and Temporary Housing Task Force (comprised of representatives from HUD, FEMA, HHS, American Red Cross (ARC), Association of Realtors, GSA, USACE, Department of Agriculture (USDA), Occupational Safety and Health Administration (OSHA), FEMA Disability Integration Coordinator, etc.); send to mobilization center ▪ Six (6) personnel to assess need of feeding, hydration, and sheltering of impacted populace; inclusive of one (1) disability/integration specialist, one (1) household/service animal specialist (USDA), one (1) IA-TAC contracting specialist, and three (3) FEMA mass care specialists ▪ Source HHS Assessment Team ▪ Identify immediate feeding, hydration, and bulk distribution (to include DME) requirements for the area(s) impacted by the hurricane, and coordinate with logistics to support requirements ▪ Coordinate with Government of the Commonwealth, local, NGOs, and faith-based organizations to determine local capabilities and shortfalls ▪ Source and deploy CAO stockpile replacements ▪ Work with the Commonwealth to identify large venue sheltering sites

Phase	Critical Tasks
Phase 2b	▪ Coordinate with each Municipality to feed, hydrate, and shelter impacted populations, including people with special and functional needs, household pets, and service animals ▪ Refine requirements and provide support and sustainment resources for scattered survivors ▪ Establish a coordinated service-delivery plan and begin moving supplies and staff into the area ▪ Establish safe and secure mass-care and shelter locations outside future high-hazard areas ▪ Work with hotels for transitional sheltering needs ▪ Identify, assess, and expand alternative sheltering options and fixed and mobile feeding sites ▪ Execute evacuation and reception plans for isolated populations and impacted communities ▪ Track movement of survivors and reunification efforts ▪ Initiate Disaster Housing and Disaster Loan Programs ▪ Expand sheltering outside the impacted areas to accommodate the expected steady increase of voluntary evacuees ▪ Initiate Individual Assistance Programs ▪ Track numbers of those in non-traditional shelters
Phase 2c	▪ Priorities of effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Commonwealth and local partners to transition from emergency and short-term recovery to long-term recovery ▪ Initiate plans to implement transitional sheltering ▪ Consolidate or move emergency shelter and plan for ongoing wrap-around services and casework ▪ Work with animal coalitions to establish plans for consolidating household pet shelter inclusive of reuniting pets with owners, providing foster care, and adoption services

Table 5: Critical Tasks for Temporary Home Repairs

Phase	Critical Tasks
Phase 1a	▪ Facilitate information flow in the pre-incident phase and coordinate intergovernmental planning, training, and exercising to prepare assets to support temporary repair. ▪ Develop plans that will incorporate local sector capabilities in support of response.
Phases 1b and 1c	▪ Confirm Utility owner/operators can support the assessment of utilities systems and supporting infrastructures. Ensure providers can assist with damage assessment and restoration activities. ▪ Mission Assign the Infrastructure Assessment Planning and Response Team (PRT) to perform ongoing risk assessments to infrastructure assessments
Phase 2a	▪ Refine initial capacity, damage, and needs assessments ▪ Coordinate with EMAC for Building Inspections
Phase 2b	▪ Identify resource needs and the potential sources ▪ Activate RSFs, if required.

4 End State and Stabilization

The stabilization of the Food, Water, Shelter Community Lifeline after a hurricane depends on the stabilization or the return to service of the other Lifelines as well as the reopening of grocery stores and the restoration of public utilities, which will allow most of the survivors to return to their home. A shortage of building inspectors will increase the need for temporary housing because survivors will be wary of returning to a non-inspected residence. Shortages of critical resources, such as commodities, food, and water as well as trained personnel, could result in a competition for these resources among the Commonwealth and its municipalities. Survivors who rely on the Supplemental Nutrition Assistance Program (SNAP) might experience a delay in getting and even the availability of their benefits because of hurricane damage. Therefore, they might need supplemental support.

Stabilization will be achieved as soon as all survivors, their pets, and their service animals have access to food, water, sanitary services, and sheltering that includes cellular reception, capacity, accessibility, and wrap-around services, is supporting the displaced population. Additionally, sufficient resources are in place to sustain agricultural requirements and the needs of the agricultural sector.

Table 6: The Stabilization of the Food, Water, Shelter Components

Lifeline Component	End State	Pre-Incident Planning
Commodities	▪ The distribution of food is no longer required. Grocery stores have been reopened. The feeding operations and food banks of voluntary organizations are operational.	▪ Establish a set of commodities in strategic locations prior to an incident with commodities that have a long-term (10+ years) shelf life.
Bulk Water	▪ The distribution of potable and non-potable bulk water is no longer required because water and wastewater utilities have been restored. ▪ All customers are now receiving the fully restored services of these utilities.	▪ Availability of enough potable water and vehicles capable of transporting bulk water staged at key locations with a contract in place for the immediate use of these resources, if required. ▪ Identify and establish redundant power at critical facilities.
Water Utilities	▪ The services of the water utilities have been restored to all customers.	▪ Redundant power at critical facilities was Identified and established.
Sheltering and Housing	▪ All survivors in a shelter have transitioned to permanent housing, which includes accommodations for persons with a disability as well as an access or a functional need.	▪ Public-sector and private-sector partnerships, including hotels, motels, and home rental agencies, that could assist in temporarily housing the survivors, have been identified and established.
Temporary Home Repairs	▪ All eligible survivors have been given access to programs, such as the Sheltering and Temporary Essential Power Program (STEP) and the Voluntary Agencies Leading and Organizing Repair (VALOR) Program, which will allow them to return to and remain in their home while permanent repairs are being made.	▪ The newest building codes were adopted. Building inspectors were trained. Therefore, higher standards for residences as well as commercial and industrial buildings are being enforced.

5 Authorities

- The Governments of the Commonwealth and its Municipalities are responsible for providing mass care, including sheltering and POD operations. Sheltering could include organized shelters, ad hoc shelters established by community organizations, and spontaneous shelters established by evacuees.
- FEMA is the coordinator for Emergency Support Function #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services. In coordination with the Red Cross and the National Voluntary Organizations Active in Disaster (National VOAD), ESF #6 will support shelter operations and the temporary housing program, as needed. The ESF #6 framework can be employed with or without a Stafford Act declaration.
- FEMA and the General Services Administration (GSA) are the coordinators for ESF #7 – Logistics. In coordination with ESF #6, ESF #7 will support POD operations.

- The Commonwealth is responsible for public messaging, including shelters and POD locations. DHS is the coordinator for ESF #15 – External Affairs and will coordinate with the Commonwealth for assistance with the development and dissemination of consistent, timely, and accurate messages.
- Additional federal support for the Food, Water, and Shelter Lifeline includes:
  - USACE, the coordinator for ESF #3 – Public Works and Engineering, will support several components of the Food, Water, and Shelter Lifeline.
  - HHS, the coordinator for ESF #8 – Public Health and Medical Services, will provide medical support for shelters in coordination with ESF #6. HHS will also coordinate emergency behavioral health services for shelter residents and first responders.
  - USDA, the coordinator for ESF #11 – Agriculture and Natural Resources, will provide support to shelters in coordination with ESF #6. This support will be primarily in the form of guidance by SMEs for the operations of pet shelters. ESF #11, if requested, will also support the augmentation of commodities for the PODs.

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Appendix G-3: Lifeline – Health and Medical

1 Introduction

The Health and Medical Community Lifeline provides emergency medical services and the available acute medical care needed to meet the immediate lifesaving and life-sustaining needs of the survivors. As the medical care facilities are restored to the normal capabilities, behavioral health capabilities will support longer-term survivor needs and the public health operations impact on the long-term health of the community.

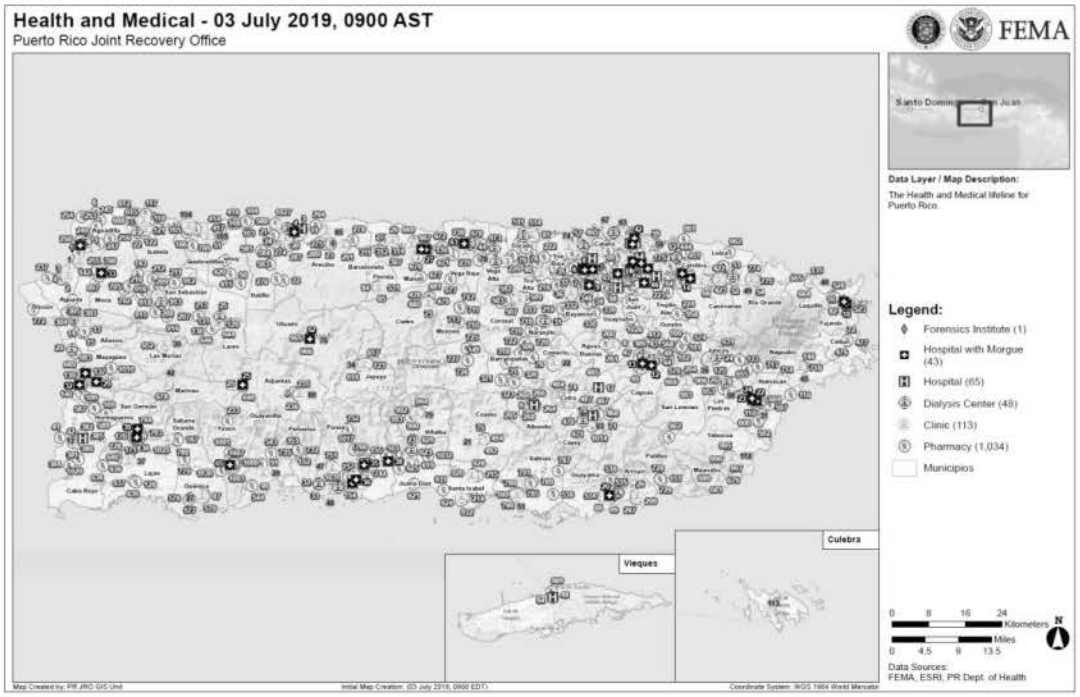

Figure 1: An Overview of Healthcare Facilities

2 Impacts

A hurricane is likely to trigger an increase in diseases caused by a lack of sanitation, an increase in pressure on the healthcare system, and the loss of healthcare facilities that are inoperable due to structural damage.

Table 1: The Impacts on the Health and Medical Lifeline

Lifeline Component	Impact
Emergency Medical Services	▪ Ambulatory services are expected to be impacted by the transportation sector. Many older populations and people with chronic illness will be affected that would require additional assistance or could experience medical complications resulting from other lifeline impacts. ▪ Population in area of impact: 1,750,000
Medical Care Facilities	▪ 20 healthcare facilities are expected to have damage.
Fatality Management	▪ It is expected to have 11,375 fatalities.
Public Health	▪ Due to the potential for damage and loss of power, an increase in disease from lack of sanitation, increased pressure on the healthcare system. It is expected that 6,000 people will require hospitalization.
Behavioral Health	▪ The incident will cause mental stress and a need for crisis counseling, that needs to be carried out in a culturally sensitive manner to avoid further implications of social stigma.
Medical Supply Chain	▪ Approximately, 22% of United States pharmaceutical exports are manufactured in Puerto Rico. Destabilization of the facilities and ports of departure will have cascading impacts to other medical facilities.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-3.

The primary focus is to provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support.

Initial targets include delivering medical countermeasures to exposed populations, completing triage and initial stabilization of casualties, followed by the definitive care of those likely to survive their injuries. Concurrently, supplemental fatality management services are a priority of effort, including body recovery, victim identification, and temporary mortuary solutions; in addition to supporting survivors with deceased relatives, and developing plans for disposition of unclaimed bodies and long-term storage.

Secondary targets include the completion of health assessments, identifying a recovery processes, and the return of medical surge resources to pre-incident levels.

The first Priorities of Efforts are to:

- Activate, deploy, and stage ESF #8 medical teams and assets at identified ISBs;
- Activate, deploy, and employ targeted medical resources to support immediate lifesaving operations;
- Initiate and expand the assessments of hospitals and medical-care facilities to establish situational awareness and determine the shortfalls in each Municipality;
- Expand operations to territorial identified care-delivery sites;

- Activate and deploy Federal, territorial, and private-sector patient movement resources;
- Evacuate patients from non-operational healthcare facilities; Establish reception areas for medical evacuees, and establish casualty-transportation priorities;
- Support Commonwealth and Municipal resources caring for patients with chronic health needs; and
- Implement all surviving public-health response activities

If the Disaster Medical Assistance Team (DMAT), Federal Medical Stations (FMS), and/or the Disaster Mortuary Operational Response Team (DMORT) are requested, "wrap-around" services will need to be supplied by the Commonwealth or coordinated through the RRCS. This includes food, water, shelter, sanitation (including showers), laundry, and waste-removal services for all members of the medical staff. Emergency behavioral health support may be requested to supplement territorial services for shelter residents and first responders.

Table 2: Critical Tasks for Emergency Medical Services

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memoranda of understanding (MOU), and interagency agreements (IAA) with Federal departments and agencies to provide supplemental personnel and resources ▪ Coordinate with medical facilities in CONUS the reception of high-risk patients.
Phases 1a and 1b	▪ Mission assign activation of National Disaster Medical System (NDMS) Patient Movement/Evacuation System – En-route Patient Staging System. ▪ Coordinate with ESF-8 to deploy the DMAT and Medical Strike Teams ▪ Alert Resource Support Section of potential activation of Federal Medical Station sites
Phase 2a	▪ Initiate the activities authorized by the Declaration of a Public Health Emergency by the Secretary of Health and Human Services, which will provide targeted public-health and medical support and products to all persons in need in the affected area. Issue waivers, if requested and appropriate. ▪ Issue waivers if they are requested and appropriate. ▪ Source and deploy a complete Incident Response Coordination Team (IRCT) and source an HHS Logistics Response Assistance Team (LRAT). ▪ Source 15 Disaster Medical Assistance Teams (DMAT) and ask them to report immediately to the Mobilization Center in CONUS. ▪ Source two Federal Medical Stations (FMS) with staffers from the Public Health Service. ▪ Deploy four more DMATs with their equipment. (Note: Four DMATs are already on-island, having been sent there before the hurricane.) ▪ Determine the appropriate placement of the Federal Medical Stations.
Phase 2b	▪ Deploy the HHS LRAT and the IRCT, and assessment teams. ▪ Begin assessments cross walking/utilizing other core capabilities (e.g., mass care, public health and medical needs, assessment of the health care system/facility infrastructure, the status of dialysis treatment facilities, and the need for ESRD patient evacuation) ▪ Establish triage areas on the fringe of non-affected areas. ▪ Begin the Patient Movement Planning Process in coordinating with the DOD Joint Regional Planning Officer and Veteran Affairs. ▪ Coordinate with ESF #15 – External Affairs, FEMA's International Affairs Division and VIDOH for additional support. Request USAID, Doctors without Borders, and the Medical Reserve Corps (MRC) of the Commonwealth, as needed and if available. ▪ Deploy the 10 remaining DMATs with their equipment. ▪ Roster additional DMATs to backfill deployed teams, as necessary.
Phase 2c	▪ Continue sourcing and deploying EMS assets in support of the requests and based on the needs of the Commonwealth.

Table 3: Critical Tasks for Medical Care Facilities

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Enhance the preparedness and resiliency of the healthcare systems of the affected community with preparedness grants, mitigation efforts, readiness guidance, and support for planning, training, and exercising.
Phases 1b and 1c	▪ Determine the capabilities of medical facilities for sharing and transporting resources (i.e., personnel, equipment, medications). ▪ Ask the General Services Administration (GSA) to provide emergency leasing services to locate sites for Joint Field Offices, warehouses, and other facilities that will support logistics and sheltering.
Phase 2a	▪ Assess medical facilities, including, hospitals, dialysis centers, long-term care facilities, and non-traditional medical facilities to determine their operational capabilities. Building engineers and medical professionals might be needed to make these assessments, which should be coordinated with ESF #8.
Phase 2b	▪ Stabilize damaged medical facilities, and begin to reopen them, if possible. ▪ Deploy teams from ESF #8 to set-up temporary medical facilities near damaged hospitals and clinics (e.g., in parking lots, nearby stadiums). ▪ Continue sourcing and deploying medical assets in support of the requests and based on the needs of the Commonwealth.
Phase 2c	▪ Continue to source and deploy medical assets in support of the requests and based on the needs of the Commonwealth.

Table 4: Critical Tasks for Fatality Management

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Enhance the preparedness and resiliency of the mortuaries systems with as well as communities through preparedness grants, mitigation efforts, readiness guidance, and support for planning, training, and exercising.
Phase 1b and 1c	▪ Coordinate with ESF #8 to deploy the Disaster Mortuary Operational Response Teams. ▪ Determine the capabilities of morgues and cold-storage facilities to transport and store resources until collection.
Phase 2a	▪ Assess the mortuary needs and the impact of the casualties on the affected population. ▪ Mortuary Affairs (16 pax) Location dependent on requirement.
Phase 2b	▪ Continue sourcing and deploying fatality-management assets in support of the requests and based on the needs of the Commonwealth.
Phase 2c	▪ Continue sourcing and deploying fatality-management assets in support of the requests and based on the needs of the Commonwealth.

Table 5: Critical Tasks for Public Health

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Coordinate with the components of ESF #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services to ensure the full, efficient, and timely delivery of mass-care services is provided.

Phase	Critical Task(s)
Phases 1b and 1c	▪ Activate the Secretary of Health and Human Services' Emergency Management Group and the HHS/Office of the Assistant Secretary for Preparedness and Response's IRCT. ▪ Initiate the deployment of the IRCT and the medical response teams with supply caches.
Phase 2a	▪ Assess damage to public health infrastructure and personnel capacity ▪ Consider waivers which may be needed for public health facilities, or policy changes which may be needed to aide in incident stabilization (i.e. prescription drug waivers, etc.) ▪ Coordinate with ESF #8 to assess the need, source, and deploy any needed assets
Phase 2b	▪ Continue sourcing and deploying public health assets in support of the requests and based on the needs of the Commonwealth. ▪ ESF #8 coordinates with EPA to ensure containment of potential hazards causing spread of disease.
Phase 2c	▪ Continue sourcing and deploying public health assets in support of the requests and based on the needs of the Commonwealth.

Table 6: Critical Tasks for Behavioral Health

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Enhance the preparedness and resiliency of health and medical systems, as well as communities through preparedness grants, mitigation efforts, readiness guidance, and support in planning, training, and exercises
Phases 1b and 1c	▪ Request and deploy behavioral health personnel to support general population sheltering operations in response to validated unmet needs.
Phase 2a	▪ Assess the behavioral health need and impacts to the affected population. ▪ Coordinate with ESF #8 to begin sourcing behavioral health assets and expertise ▪ Consider partnering with VOADs to supplement personnel.
Phase 2b	▪ Continue sourcing and deploying behavioral health assets in support of the requests and based on the needs of the Commonwealth.
Phase 2c	▪ Continue sourcing and deploying behavioral health assets in support of the requests and based on the needs of the Commonwealth.

Table 7: Critical Tasks for the Medical Supply Chain

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies for the manufacturing, testing, storage, and distribution of the products. ▪ Sector-Specific Agencies (SSA) and CISA reach out to the stakeholders of critical infrastructures during incident-management operations to collect and share information, as part of National Level Reporting (NLR) requirements.
Phases 1b and 1c	▪ This includes the ability of the existing supply chain resources to meet the manufacturing, testing, storage, and distribution of these products
Phase 2a	▪ Assess the impacts of the hurricane on the medical supply chain, including its impact on supplies reaching the Commonwealth and its cascading impacts on the CONUS. ▪ Consider opening the Strategic National Stockpile to supplement needed medical supplies. ▪ Coordinate with ESF #8 to source and deploy these resources.
Phase 2b	▪ Assess the burn rate for medical supplies and begin planning for long-term impact. ▪ Begin sourcing alternative methods for getting these supplies, if needed.
Phase 2c	▪ Continue sourcing and deploying the assets of the medical supply chain in support of the requests and based on the needs of the Commonwealth.

4 End State and Stabilization

Stabilization of the Health and Medical Community Lifeline in the wake of a hurricane depends on the stabilization or return to service of the other Lifelines. Hospitals depend on power, potable water, an operable wastewater system, and adequate communications to support the needs of the affected population. Hospitals require special chemicals and the removal of hazardous materials and biological waste to maintain their core operations. Pre-planning should include this process.

The Health and Medical Lifeline will be stabilized as soon as all survivors, their pets, and their service animals have access to the required medical and veterinary care, emergency medical systems are capable of managing the movement of patients, enough temporary support for fatality management is in place to meet the demand, and the medical supply chain is capable of resupplying medical care providers.

Table 8: The Stabilization of the Components of the Health and Medical Lifeline

Lifeline Component	End State	Pre-Incident Planning
Emergency Medical Services	▪ Emergency medical services for the affected community have been fully restored.	▪ The resources of enough emergency medical services were staged for a rapid response based on the needs of the affected population. ▪ The National Ambulance Contract was ready to be deployed, if the Commonwealth and its municipalities requested its deployment.
Medical Care Facilities	▪ The normal operations of medical facilities have been fully restored.	▪ Coordinate with medical facilities to identify essential medical supply chains, necessary stockpiles, and emergency generation capabilities.
Public Health	▪ Epidemiological and public-health capabilities, such as surveillance, outreach, vector control, and immunization, have been fully restored.	▪ Ensure adequate stockpiles have been staged at a key location for immediate deployment to field operations.
Behavioral Health	▪ Crisis care as well as psychological and behavioral healthcare services have been fully restored.	▪ Train and coordinate with ASSMC for disaster crisis counseling. ▪ Plan for cultural sensitivity regarding counselor selection and placement
Medical Supply Chain	▪ The operations of the medical supply chain for manufacturing, transporting, and exporting supplies is fully restored.	▪ Coordinate with the Private Sector Liaison to ensure that the medical supply chain has redundancies and measures for structural mitigation in place.

5 Authorities and Potential Waivers

5.1 Authorities

HHS is the coordinator for ESF #8 – Public Health and Medical Services. HHS is the Lead Federal Agency (LFA) and Sector-Specific Agency (SSA) for incidents involving public health. As the SSA, HHS is responsible for assembling leaders in business and government to prepare for and protect against all the hazards facing the Healthcare and Public Health (HPH) Sector.

Under the National Infrastructure Protection Plan (NIPP) of 2013, governmental and private-sector entities share the responsibility for securing and enhancing the resilience of the critical infrastructures of the HPH Sector. This public and private partnership identifies and prioritizes

the most critical elements of the Nation's HPH infrastructure, shares information on risks impacting that infrastructure, and implements activities to protect and enhance the resilience of the sector.

5.2 Potential Waivers

The thirteen (13) articles of the Emergency Management Assistance Compact (EMAC) set the foundation for sharing resources from state to state that have been adopted by all 50 states, the District of Columbia, Puerto Rico, US Virgin Islands, and has been ratified by Congress (PL-104-321). Medical professionals deployed through the EMAC are subject to Article V, stating whenever any person holds a license, certificate, or other permit issued by any state party to the compact evidencing the meeting of qualifications for professional, mechanical, or other skills, and when such assistance is requested by the receiving party state, such person shall be deemed licensed, certified, or permitted by the state requesting assistance to render aid involving such skill to meet a declared emergency or disaster, subject to such limitations and conditions as the governor of the requesting state may prescribe by executive order or otherwise. Medical professionals deployed through ESF 8 do not require additional licensing to work within their medical certifications in the Commonwealth.

Hyperlink: Emergency Management Assistance Compact

When the President declares a disaster or emergency under the Stafford Act or the National Emergencies Act (NEA) and the Secretary of the HHS declares a public-health emergency under Section 319 of the Public Health Service Act, the Secretary is authorized under section 1135 of the Social Security Act to waive or modify particular requirements of Medicare, Medicaid, and the Children's Health Insurance Program (CHIP) to ensure that (1) enough health care supplies and services are available to meet the needs of persons enrolled in these programs in the affected area during specified time periods and (2) the providers of such services acting in good faith can be reimbursed and exempted from sanctions absent any determination of fraud or abuse.

Hyperlink: Health and Human Services, Centers for Medicare & Medicaid Services

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Appendix G-4: Lifeline – Energy (Power and Fuel)

1 Introduction

The Energy Community Lifeline is fundamental to maintaining essential services. A hurricane often interrupts the processes for generating, transmitting, and distributing electric power and damages its infrastructures, which often results in hardships and life-threatening situations for the affected population. The cascading impacts of power outages affect the other Lifelines, causing further deterioration in the survivors' standard of living and complicating response efforts.

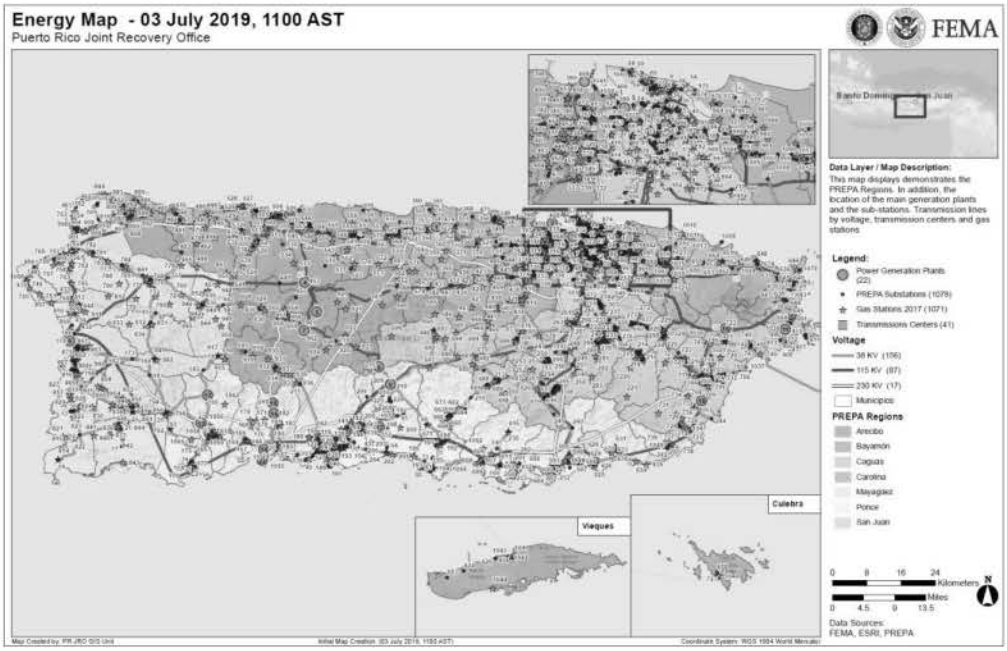

Figure 1: The Components of Power Generation

2 Impacts

Successful restoration efforts depend on the coordinated response of the utilities, ESF #12, FEMA, emergency management and public safety agencies, electrical industry partners, and other key stakeholders. Primary issues include:

- Cascading impacts of power disruptions; support for the generation, transmission, and distribution of electric power; and support for system restoration activities among all affected partners.

- Examining impacts to energy infrastructure systems and any cascading impacts to other sectors to prioritize energy restoration activities/integration of backup power generation and fuel requirements.
- Ensuring utility crews can travel to the affected areas (having roads cleared of debris) as well as lodging and operational support considerations.
- Maintaining situational awareness in an extended power outage environment.
- Facilitating coordination and logistical support among territorial and private sector stakeholders with processes established to request utility support, debris removal, sheltering, volunteer management, traffic control, and public safety assistance.

Using information about the electric power sector (e.g., the capacity and operational status of electric power systems, pipelines, fuel refineries, levees, dams, and key public infrastructures) to develop a Common Operating Picture (COP) and a system for sharing this information with decision makers.

Table 1: Impacts on the Components of the Energy Lifeline

Lifeline Component	Impacts
Power	▪ There are 22 electric power facilities in Puerto Rico, 54% of which lie in the southern region. If the hurricane strikes its southern region, its impact could prolong the time it will take to restore the electric grid. ▪ A blackout across the Commonwealth will cause significant damage to the electric grid, including its transmission and distribution systems.
Fuel	▪ Puerto Rico does not produce any petroleum, natural gas, or coal. Therefore, the Commonwealth cannot refine these sources of fuel. ▪ Puerto Rico will need fuel for as many as 1,000 generators. The burn rate might be as high as 100,000 gallons of fuel per day for as many as 60 days.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the CAHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix G-4.

Table 2: Critical Tasks for the Power Components

Phase	Critical Task(s)
Phase 1a	▪ Develop and review PSMAs, MOUs, and interagency agreements with Federal departments and agencies for the manufacture, testing, storage, and distribution of these components. ▪ Sector-Specific Agencies (SSA) and CISA conduct outreach to critical infrastructure stakeholders during incident management operations to collect and share information as part of National Level Reporting requirements
Phase 1b and 1c	▪ Analyze and model the potential impacts on the electric power, oil, natural gas, and coal infrastructures, and determine the effect that a disruption in their services will have on other critical infrastructures. ▪ Deploy USACE management cell & planning response team (PRT) ▪ Coordinate with ESF-12 to advise when the decision point has been reached to shut down power infrastructure in an impacted area

Phase	Critical Task(s)
Phase 2a	▪ FEMA activates generator staging bases to provide the space to receive, maintain, and prepare generators for installation ▪ Establish and sustain Interagency Essential Infrastructure Assessment Task Force to include a representative from Department of Energy ▪ Assess the impact of the hurricane on CIKR assets, set priorities for repairing them, and determine the resources needed to affect these repairs ▪ Source DOD Civil Engineer assets to assist with stabilization and repair efforts. Process requests for information and/or assistance from critical infrastructure owners and operators ▪ Source and deploy, through ESF #3, the 249th Engineer Battalion (Prime Power) with an USACE Action Officer (AO) ▪ Activate the USACE's Advanced Contract Initiative (ACI) to support debris removal, the restoration of potable water, temporary roofing, and emergency power ▪ Coordinate efforts in conjunction with the public-sector and private sector-assets that have a high potential for mitigating the cascading effects of the hurricane; assess the infrastructure plan and implement prevention or mitigation activities. ▪ Begin making assessments.
Phase 2b	▪ FEMA activates generator staging bases to provide the space to receive, maintain, and prepare generators for installation. Generators not in stock are delivered to generator staging bases ▪ Source and deploy additional USACE technical assistance personnel and DoD Civil Engineering assets ▪ Identify the personnel, materials, and equipment currently on-island, and any additional items needed for restoration (include quantities and specifications) ▪ Identify the purchasing entity for these resources, which will be used for the restoration of the power grid and the provision of temporary power (i.e., a basic order of materials [BOM] and generators provided by VITEMA or FEMA), and the logistical support needed to manage these resources. ▪ Work with DOT and USCG to identify a single point (i.e., a port) for delivery of materials and equipment for the restoration of the electric grid ▪ Begin planning the logistics (transportation, lodging, staging for equipment and supplies) needs to support off-island power grid restoration crews and equipment (e.g., industry mutual aid, and other (Federal) crews) ▪ Contract with private-sector providers for the repair of the generation and transmission issues
Phase 2c	▪ Develop and implement a mitigation plan based on the priorities of the assessments.

Table 3: Critical Tasks for the Fuel Components

Phase	Critical Task(s)
Phase 1a	▪ Develop and review PSMAs, MOUs, and interagency agreements with Federal departments and agencies for the manufacture, testing, storage, and distribution of these components. ▪ Sector-Specific Agencies (SSA) and CISA conduct outreach to critical infrastructure stakeholders during incident management operations to collect and share information as part of National Level Reporting (NLR) requirements
Phase 1b and 1c	▪ Coordinate with VITEMA to communicate refueling locations for emergency responders. ▪ Alert the Fuel Contract provider of the potential activation of the fuel contract ▪ Mission Assign the Defense Logistics Agency to provide and distribute fuel.
Phase 2a	▪ Establish and sustain the Interagency Essential Infrastructure Assessment Task Force to include a representative from Department of Energy ▪ Source and deploy, through ESF #3, the 249th Engineer Battalion (Prime Power) with an USACE Action Officer (AO) ▪ Activate the USACE's ACI to support emergency power. ▪ Deploy a USACE Management Cell and Planning Response Team (PRT) ▪ Source and deploy through ESF #3 the Deployable Tactical Operations System (DTOS) to support USACE operations.

Phase	Critical Task(s)
	▪ Coordinate efforts in conjunction with the public-sector and private sector-assets that have a high potential for mitigating the cascading effects of the hurricane; assess the infrastructure plan and implement prevention or mitigation activities.
Phase 2b	▪ Source and deploy additional USACE technical assistance personnel and DOD Civil Engineering assets ▪ Identify the personnel, materials, and equipment currently on-island, and any additional items needed for restoration (include quantities and specifications) ▪ Identify the purchasing entity for these resources, which will be used for the restoration of the power grid and the provision of temporary power (i.e., a basic order of materials [BOM] and generators provided by VITEMA or FEMA), and the logistical support needed to manage these resources. ▪ Begin planning the logistics (transportation, lodging, staging for equipment and supplies) needs to support off-island fuel grid restoration crews and equipment (e.g., industry mutual aid, and other (Federal) crews) ▪ Work with DOT and USCG to identify a single point (i.e., a port) for delivery of materials and equipment for the restoration of fuel distribution ▪ Work with VITEMA and DOT to provide technical assistance on assessing the damage to and repairing the fuel lines. ▪ Contract for the distribution of fuel with a territorial provider, if possible. ▪ Provide temporary power for fueling stations. ▪ Use undamaged fuel terminals to supply fuel for emergency operations and implement measures for handling fuel shortages.
Phase 2c	▪ Develop and implement a mitigation plan based on the priorities of the assessments.

4 End State and Stabilization

Stabilization of the Energy Lifeline in the wake of a hurricane depends on the stabilization or return to service of fuel distribution and the power grid. This is achieved when generators are providing temporary emergency power for all critical facilities necessary to stabilize the other Lifelines and persons who depend on electric power for life-sustaining medical devices, and that fuel is available for first responders and for survivors as needed.

Table 4: The Stabilization of the Energy (Power and Fuel) Lifeline

Lifeline Component	End State	Pre-Incident Planning
Fuel	▪ The commercial fuel distribution system has been fully re-established; all types of fuel are now available.	▪ A fuel contract is in place for refueling emergency power generators and responder vehicles.
Power	▪ The spot generation of electric power at pre-identified government facilities and state-designated sites is no longer required. ▪ Resources for temporary power have been reallocated or demobilized as the services of electric utilities have been restored to all customers.	▪ ESF #3 is alerted and activated to provide emergency power in coordination with ESF #7 and its territorial partners. ▪ ESF #12 is alerted and activated to support assessments of the power generation, transmission, and distribution infrastructures post-landfall.

5 Authorities and Potential Waivers

5.1 Authorities

DOE is the lead coordinator for ESF #12 – Energy. DOE serves as the LFA and the SSA for power-related incidents. In the wake of a hurricane, support for generators could be critical for

response and sheltering operations, which will be supported by ESF #7 – Logistics, led by Region 2 Logistics, and supported by ESF #3 – Public Works and Engineering, led by USACE.

Table 5: Authorities and Regulations for the Energy Lifeline

Title	Description
Critical Infrastructure Act of 2002 (P.L 107-296)	Establishes the Protected Critical Infrastructure Information (PCII) Program. It creates a framework that enables members of the private sector to voluntarily submit sensitive information regarding the Nation's critical infrastructure (CI) to the US Department of Homeland Security (DHS) with assurance that the government will not expose sensitive or proprietary data. It also establishes support within DHS Cybersecurity and Infrastructure Security Agency (CISA)
Defense Production Act of 1950 (DPA) (50 USC)	Authority to require acceptance and priority performance of contracts and orders to promote national defense, which includes emergency preparedness activities pursuant to Title VI of the Stafford Act and CI protection and restoration and to maximize domestic energy supplies. The Federal Priorities and Allocations System administers the placement of DPA priority ratings in contracts involving industrial, agricultural, health, energy, and transportation resources and services. The President delegated authority to require acceptance and priority performance of contracts or orders for these categories of resources and services to the US Department of Commerce (DOC), US Department of Agriculture (USDA), US Department of Health and Human Services (HHS), DOE, and US Department of Transportation (DOT), respectively. Though the placement of priority ratings in contracts and orders. This authority can ensure the timely delivery of materials and services from private business to restore power disruptions. Priority ratings can be placed on either government (local, state, federal) or private sector contracts. Additionally, the installation of government-owned equipment authority may expedite and prioritize the restoration of both public and private power infrastructure disrupted by either natural or human-caused hazards. Voluntary agreements under DPA may facilitate cooperation among business competitors to protect or restore power systems in connection with natural disasters or acts of terrorism. Participants in a voluntary agreement are granted relief from antitrust laws.
Emergency Reconstruction of Interstate Gas Facilities Under the Natural Gas Act 0f 2003 (18 CFR Parts 153, 157, and 375)	The Federal Energy Regulatory Commission (FERC) regulations enable interstate natural gas pipeline companies, under emergency conditions, to replace mainline facilities using-if necessary- a route other than the existing right-of way and to waive the 45-day prior notice requirement and cost constraints.
Power Plant and Industrial Fuel Use Act of 1978 (FUA) (42 USC)	Under section 404(a), this act gives the President authority to allocate coal (and require the transportation of coal) for use by any power plant or major fuel-burning installation during a declared severe energy supply interruption as defined by section 3(8) of the Energy Policy and Conservation Act (EPCA), 42 USC. § 6202(8).

5.2 Potential Waivers

- DOT has the authority to issue waivers that will be in effect in the wake of a disaster regarding:
  - Hours of Service for transporting hazardous materials; and
  - Certain operator enforcement qualifications arising from the use of personnel for pipeline activities related to response and recovery
- EPA has the authority to issue waivers that will be in effect in the wake of a disaster such as:
  - A No Action Assurance that allows fuel loading and unloading without the use of vapor recovery or vapor combustion devices at bulk marine loading terminals and associated truck racks; and
  - A temporary waiver of penalties for excess emissions

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Appendix G-5: Lifeline – Communications

1 Introduction

The Communications Lifeline is fundamental for the maintenance of operational coordination, operational communications, Situational Awareness, a Common Operating Picture, and public messaging. The ability to communicate accurate information in a timely manner, which is a critical factor in a successful Response, could be impeded or degraded in the wake of a hurricane.

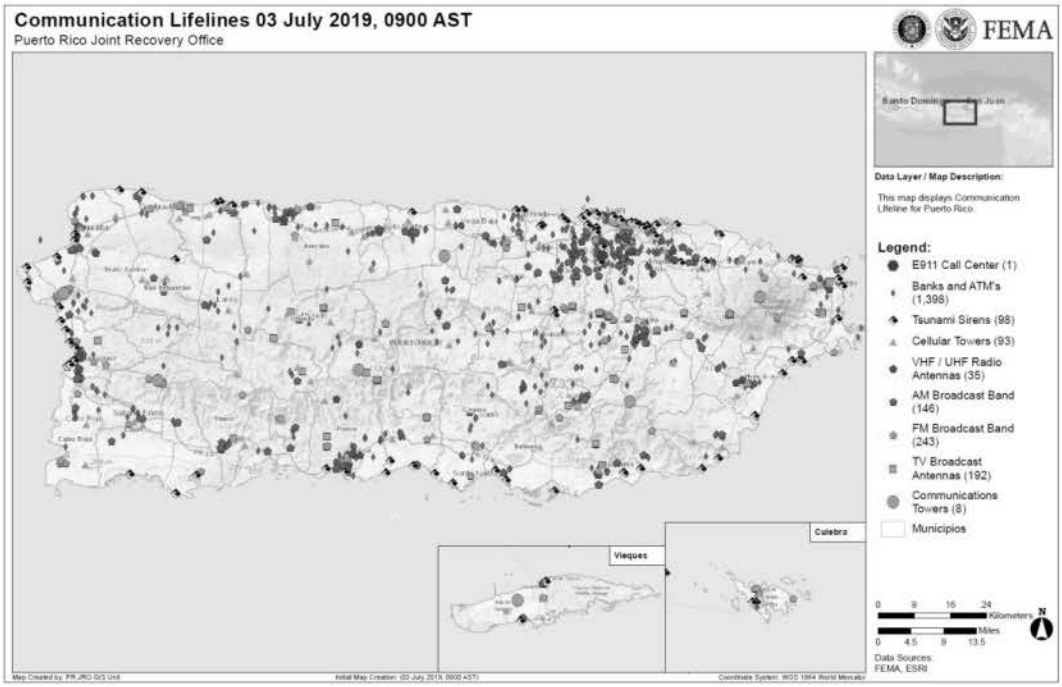

Figure 1: Communications Nodes

2 Impacts

A hurricane might result in the degradation or the total failure of the communications infrastructure, which will impede the capabilities of federal and territorial as well as private-sector and non-profit organizations to respond. Limited communication capabilities for search and rescue, situational assessment, and operational coordination will delay the response. Therefore, large-scale assets from outside the affected area will be required. Even though personnel at the Watch Center will be available 24/7 to keep FEMA personnel well informed, the communications infrastructure might not be accessible in the Commonwealth.

Physical damage to the electric power infrastructure (e.g., from downed power lines, flooding) could also compromise the telecommunications infrastructure, which would require the employment of additional federal communications support.

Table 1: Impacts on the Communications Lifeline

Lifeline Component	Impact(s)
Infrastructure	▪ The cellular and the landline components of the communications system in the affected area are susceptible to damage. ▪ Extended power outages will limit the use of the internet, cell phones, and non-battery radios by the survivors.
Alerts and 911	▪ The ability of the Commonwealth's Emergency Operations Centers to communicate with the public will be a critical concern, especially if further evacuations are required.
Responder Communications	▪ Because Situational Awareness will be difficult to get and disseminate, building a Common Operating Picture and coordinating response efforts will be challenging. Efforts to deploy and employ resources effectively will become more complicated. Federal responders, however, will have access to satellite telephones and point-to-point (P2P) communications systems to ensure viable communications across the Response.
Financial Institutions	▪ The viability of the Commonwealth's financial institutions will be affected by the hurricane. ▪ Power outages will impact the ability of automated teller machines to dispense cash and local businesses will be unable to process credit card or debit card transactions.

Regional leaders will communicate with the Commonwealth and FEMA Headquarters using satellite and radio communications to gain national coordination and Situational Awareness. The interdependencies of the communications, power, and transportation infrastructure will affect the timelines for the response to and the restoration of the communications sector. In heavily damaged areas, the only means of communication will likely be Radio Frequency (RF) (e.g., satellite telephones). Households in mountainous areas of the Commonwealth are likely to sustain moderate to severe damage from land subsidence and residents will be isolated for an extended period.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix G-5. The initial goals include:

- Establish capabilities for interoperable voice and data communications among federal, territorial, and district first responders, the emergency response community, and the affected population.
- Restore enough of the communications infrastructure to support repair teams and all lifesaving and life-sustaining activities.
- Provide timely communications in support of public safety, security, and response operations, and Situational Awareness is shared with the affected community and all the response forces in impacted areas, using all available resources

Table 2: Critical Tasks for the Communications Infrastructure

Phase	Critical Task(s)
Phase 1a	▪ Operational communications focus on planning, training, and exercising as well as assessing communications capabilities if an incident occurs. ▪ Convene meetings with federal, territorial, and private-sector communications leaders, as appropriate, to implement the first actions of the Concept of Operations.
Phase 1b and 1c	▪ Assess and facilitate interoperable communications for response and support operations. ▪ Identify potential staging areas for the Mobile Communications Operations Vehicles (MCOV).
Phase 2a	▪ Assess the status of command, control, and communications, including lines of communication outside the affected area with the FEMA CAO, the Region 2 RRCC, PREMB EOC's, and identify the requirements and priorities for the area's restoration. ▪ Identify possible additional needs including power generation. ▪ Source and deploy communication specialists to Puerto Rico in support of Incident Management Assistance Team (IMAT). ▪ Source two (2) and deploy one (1) MERS (or equivalent Federal agency interoperable assets) communication package; second MERS sent to mobilization center.
Phase 2b	▪ Source and deploy an ad-hoc communications package. ▪ Deploy second MERS to Puerto Rico. ▪ Determine support requirements of leadership in the incident area including: • PREMB EOC and the zone EOCs, FEMA facilities and field teams. ▪ Mission assignment and deploy DOD for additional communications specialist.
Phase 2c	▪ Coordinate with whole-community partners to get additional support, if needed, from: • FEMA's National Communication System (NCS); Department of Homeland Security's Office of Emergency Communications (OEC); National Telecommunications and Information Administration (NTIA); Department of Energy (DOE); Federal Communications Commission (FCC); Sprint; AT&T

Table 3: Critical Tasks for Responder Communications

Phase	Critical Task(s)
Phase 1a	▪ Coordinate planning for operational communications with the whole community. ▪ Develop, review, and distribute Federal disaster emergency communications planning information to Support Agencies.
Phase 1b and 1c	▪ Request and deploy MERS communications and logistics support and deploy MCOV's to ISB's and other locations, as needed.
Phase 2a	▪ Source and deploy communication specialists to the Commonwealth in support of the IMAT. ▪ Push communications capabilities forward to responders at the incident's location.
Phase 2b	▪ Assess and re-establish, if needed, enough communications infrastructure (i.e., PSAP 911 and EAS) in the affected area to support continuous life-sustaining activities, the provision of basic human needs, and the transition to Recovery. ▪ Source and deploy an ad-hoc communications package. ▪ Determine leadership support requirements in the affected area, including PREMB EOC's, FEMA facilities, and FEMA field teams. ▪ Mission assign and deploy an additional DOD communications specialist.
Phase 2c	▪ Coordinate with whole-community partners to get additional support, if needed, from: • FEMA's National Communication System (NCS); Department of Homeland Security's Office of Emergency Communications (OEC); National Telecommunications and Information Administration (NTIA); Department of Energy (DOE); Federal Communications Commission (FCC); Sprint; AT&T

Table 4: Critical Tasks for Financial Institutions

Phase	Critical Task(s)
Phase 1a	▪ Provide the financial and other assistance to the Government of the Commonwealth under Presidential authorization of the Stafford Act
Phase 1b and 1c	▪ The use of the Surge Account will be determined by the Regional Administrator to pre-position federal resources in anticipation of a presidentially declared emergency or major disaster
Phase 2a	▪ The Private Sector Liaison shall assess the status of financial institutions
Phase 2b	▪ Determine leadership support requirements in the affected area, including PREMB EOC's, FEMA facilities, and FEMA field teams. ▪ Activate the Department of the Treasury to deploy pallets of cash to banks in the Commonwealth as a supplemental loan. ▪ Deploy ESF #11 (Dept of Agriculture) to issue EBT paper vouchers until card readers are operational.
Phase 2c	▪ Identify the additional support that may be needed to supplement or back-fill current efforts.

4 End State and Stabilization

The stabilization of the Communications Lifeline in the wake of a hurricane depends on the stabilization or the return to services of the Energy (Power and Fuel) Lifeline.

Table 5: The Stabilization of the Components of the Communications Lifeline

Lifeline Component	End State	Pre-Incident Planning
Communications Infrastructure	▪ Reliable cellular, landline, and fiber-optic networks as well as related infrastructures have been fully restored. ▪ Survivors have access to commercial communications infrastructure to contact or be contacted by emergency services or personal contacts.	▪ The appropriate private and public parties actively engaged in pre-incident planning for potential damage to or interruption of communications in the affected communities. Planning includes preparation of temporary power generation or redundant systems.
Alerts and 911	▪ Public safety answering points are now available to the public.	▪ Maintain the functionality of the emergency-alert notification systems and the structural stability of the 911 call center.
Responder Communications	▪ First responders and field deployed staff using operable and redundant communications systems and procedures to enable operational coordination using available communications systems	▪ First responders and FEMA are pursuing purchase, maintenance, and distribution of satellite phones as a redundant communication system.
Financial Institutions	▪ The survivors now have access to financial services.	▪ Public outreach efforts through Preparedness and CPCB to ensure survivors understand the need for access to cash stores or alternate banking locations.

5 Authorities

The Region 2 Disaster Emergency Communications Coordinator (DECC) is the ESF #2 – Communications Coordinator. DHS is the LFA and the SSA for events related to communications. As the SSA representative, DECC is responsible for bringing together leaders in business and government to prepare for and protect against the hazards facing the communications sector in the wake of a hurricane.

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Appendix G-6: Lifeline – Transportation

1 Introduction

The Transportation Community Lifeline comprises the infrastructure, resources, and personnel needed to mobilize response resources and will need to be maintained and/or restored in the event of a hurricane. In the wake of a hurricane, the transportation infrastructures in the affected area, including airports, highways, ferries, seaports, and other types of infrastructure in the affected area will be severely degraded. In the days and weeks following the hurricane, fuel, power, and communications systems will be unavailable in much of the affected area. Because these systems are interconnected with the transportation infrastructures, their unavailability makes the restoration of the transportation infrastructures even more challenging.

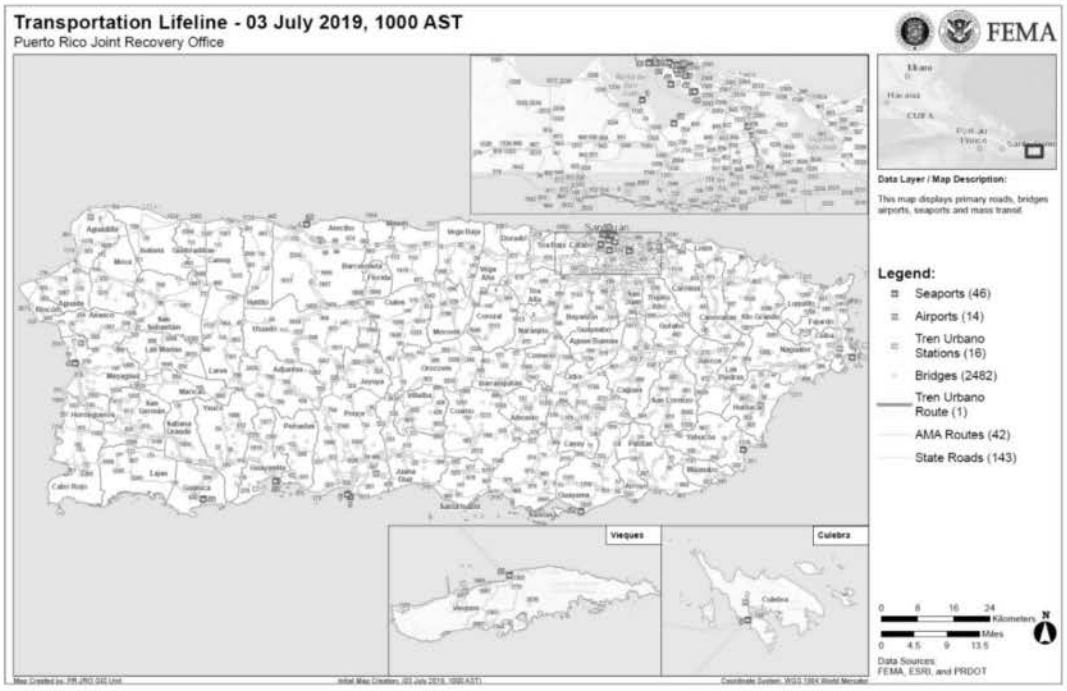

Figure 1: The Transportation Infrastructures

2 Impacts

The Commonwealth relies on a fully operational transportation system for the day-to-day movement of people and supplies. A hurricane will cause choke points in critical transportation pathways (i.e., highways and roadways, airports, and seaports), which could interrupt or impede the supply chain and the deployment of first responders.

Table 1: Impacts on the Transportation Lifeline

Lifeline Component	Impact
Highway and Roadway	At least 5,073 miles of highways and roads will be affected by the hurricane. The impact of the hurricane on highways, roadways, and bridges will severely limit the transport of durable goods and commodities to the affected area.
Buses and Railways	Even though the bus and railway stations in the metropolitan area of San Juan will suffer the impact of the hurricane, they could resume operations, depending on the operational status of electric power infrastructure and the roads.
Aviation	▪ San Juan Airport will likely be partially operational within first 3 days, unless storm takes unusual track allowing for direct strike. ▪ Secondary airports will first open on north and west side of the islands and will last open on the south and east side.
Maritime	▪ All seaports will remain closed for the first 3 days. The seaports that did not suffer a direct strike will reopen first. ▪ Seaports that suffered a direct strike could be closed for up to 90 days, if not longer, for the clearance of debris and hazardous materials. Closures and/or restrictions during daylight hours might be necessary.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix G-6. The Priorities of Effort include:

- Establishment of tactical transportation systems, functional transportation nodes, and response capabilities to deliver critical personnel, equipment, and services for search and rescue operations as well as medical care and evacuation of survivors.
- Establishment of capabilities to deliver response assets and services and to open critical airports, ferry systems, and maritime ports. Develop priorities with the Commonwealth to implement response, repair, and restoration efforts; and to provide resources for moving responders, resources, supplies, commodities, medical evacuees, and survivors as well as their pets to and from all Areas of Operation.

ESF #1 – Transportation is responsible for the main components of the Critical Transportation Core Capability. ESF #1 will coordinate sourcing with, among others:

- ESF #2 – Communications;
- ESF #3 – Public Works and Engineering;
- ESF #7 – Logistics Management and Resource Support;
- The Air and Marine Operations Branches; and
- The Critical Transportation Task Force.

FEMA will be responsible for other elements of the Critical Transportation Core Capability, such as providing contracting support or mission-assigning Other Federal Agencies (OFA) to provide transportation resources.

Table 2: Critical Tasks for Highways and Roadways

Phase	Critical Tasks
Phase 1a	▪ Establish a GeoPlatform for the incident to share Situational Awareness. ▪ Identify and catalog a national inventory of engineering resources (e.g., academics, retired engineers, and members of professional associations, such as the Society of American Military Engineers' Emergency Preparedness and Homeland Security Committee and the American Society of Civil Engineers) to develop a surge capacity for planning efforts and lower-level damage assessments.
Phase 1b and 1c	▪ Request transportation waivers and regulatory relief, and coordinate permitting and exemptions for the required modes of transportation. ▪ Coordinate resources with federal interagency partners to expand capacity to quickly deploy personnel and resources to facilitate the delivery of the Critical Transportation Core Capability and the Transportation Lifeline during the Response.
Phase 2a	▪ Identify roadways that are available for immediate use; manage and coordinate the restoration of transportation services and needs. ▪ Request the DOT to deploy assessment teams. ▪ Request USACE to deploy engineering support for initial assessments. ▪ Determine the location of the ISB, ascertain the staging areas for the Commonwealth and its Municipalities, and identify the transportation needs and the availability of resources. ▪ Request the DOT Federal High Administration (FHWA) initiate local contracts in support of assessment/clearing of national roadways to establish initial main supply routes. ▪ Source all-terrain vehicles. ▪ Coordinate with Federal departments or agencies for emergency waivers, including: VIDOT - Hours-of-Service for drivers and size and weight for trucks; DHS -Jones Act; EPA -Fuel-quality; and Initiate other emergency waiver requests to facilitate evacuation, as necessary
Phase 2b	▪ Coordinate with ESF #6 to distribute commodities, as necessary if requested by the Commonwealth. ▪ Coordinate with ESF #6 to provide transportation for the relocation of survivors. ▪ Coordinate the use of intra-island transport modes with the Commonwealth. ▪ Activate the DOT to provide a Routing Assistance Hotline (RAH) for planning purposes provide the best and safest routing information available.
Phase 2c	▪ Activate all on-island emergency contracts for transportation services. ▪ Deploy the all-terrain vehicles purchased in the CONUS.

Table 3: Critical Tasks for Mass Transit

Phase	Critical Task(s)
Phase 1a	▪ Establish a GeoPlatform for the incident to help share Situational Awareness. ▪ Identify and catalog a national inventory of engineering resources (e.g., academics, retired engineers, and members of professional associations, such as the Society of American Military Engineers' Emergency Preparedness and Homeland Security Committee and the American Society of Civil Engineers) to develop a surge capacity for planning efforts and low-level damage assessments.
Phase1b and 1c	▪ Request transportation waivers and regulatory relief, and coordinate permitting and exemptions for the required modes of transportation. ▪ Coordinate resources with federal interagency partners to expand capacity to quickly deploy personnel and resources to facilitate the delivery of the Critical Transportation Core Capability and the Transportation Lifeline during the Response.
Phase 2a	▪ Identify roadways that are available for immediate use; manage and coordinate the restoration of transportation services and needs. ▪ Request the DOT to deploy assessment team. ▪ Request USACE to deploy engineering support for initial assessments. ▪ Request the DOT Federal High Administration (FHWA) initiate local contracts in support of assessment/clearing of national roadways to establish initial main bus routes.

Phase	Critical Task(s)
Phase 2b	▪ Coordinate the use of intra-island transport modes with the Commonwealth. ▪ Contract and deploy debris removal agency if needed for supplementary efforts. ▪ Private Sector Liaison coordinates with ride-sharing companies to volunteer or to contract for transportation alternatives.
Phase 2c	▪ Activate all on-island emergency contracts for transportation resources.

Table 4: Critical Tasks for the Aviation Components

Phase	Critical Task(s)
Phase 1a	▪ Assign and deploy appropriate personnel to Aerial Points Embarkation and Debarkation. ▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Commonwealth. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.
Phase 1b and 1c	▪ Activate the Federal Aviation Administration's (FAA) Operations Liaison to the Air Operations Branch or its equivalent. ▪ Submit Aerial Embarkation Enabler Mission Assignments for approval.
Phase 2a	▪ Coordinate with the FAA, DOD, DHS, and the Commonwealth to identify airports, on-island, and Caribbean assets that are available for immediate use. ▪ Source and deploy DOD and FAA Airfield Assessment Teams. ▪ DOD will provide initial airfield management and material handling operations in the Commonwealth if San Juan International Airport is not available for initial use. ▪ FAA support requirements are to provide airfield assessment, navigational aid systems (NAVAIDS), and air traffic control. ▪ Collaborate with the Commonwealth, FAA, the Private Sector Liaison, and the GSA to assess any remaining on-island material-handling equipment, capabilities, and availability. Coordinate the use of, or the leasing of, the available equipment to support the Air Points of Debarkation (APOD). ▪ Coordinate with FAA, DOD, DHS, and GSA for CONUS based air-lift support. ▪ If required, based on assessments, source and deploy DOD assets to establish the APOD and provide material handling equipment (MHE). ▪ Initiate other emergency waiver requests to facilitate evacuation, as necessary.
Phase 2b	▪ Coordinate with mass care to provide commodities distribution actions, as necessary and if requested by the Commonwealth. ▪ Coordinate with mass care services to provide transportation for the relocation of survivors. ▪ Request FAA to deploy a Mobile Airport Traffic Control Tower (MATCT), using C-17 or other aircraft, if necessary, at key airport locations. ▪ Request FAA to deploy Mobile Asset Management Program (MAMP) assets to supplement damaged airport facilities. ▪ Coordinate with the Commonwealth for the use of intra-island transport modes. ▪ Request Puerto Rico National Guard (C-130 and UH-60 assets)
Phase 2c	▪ Activate all on-island emergency contracts for transportation resources.

Table 5: Critical Tasks for the Maritime Components

Phase	Critical Task(s)
Phase 1a	▪ Assign and deploy appropriate personnel to Maritime Points of Embarkation and Debarkation. ▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Commonwealth. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.
Phase 1b and 1c	▪ Conduct conference calls with the RRCC, (NRCC, DOD, and contractors to determine the availability of maritime transport assets. ▪ Mission assign the Maritime Administration (MARAD) for the deployment of vessels for the lodging and billeting of responders. ▪ Coordinate with ESF #1 to get the available resources from MARAD.

Phase	Critical Task(s)
	▪ Initiate a MARAD ship availability report for safe-store, berthing, command and control and port restoration support
Phase 2a	▪ DOD, USCG, and DHS to identify the seaports that are available for immediate use to manage, coordinate, and restore continuous transportation services. ▪ Coordinate with DOD, DHS, and the Commonwealth to identify seaports, on-island, and Caribbean assets that are available for immediate use. ▪ Source and deploy USACE side scanning sonar unit to support port clearance by the USCG. USCG will begin to assess the situation as soon as conditions permit. Acquiring a local sonar unit through a contract is an alternative solution. ▪ Collaborate with the Commonwealth, the Private Sector Liaison, and the GSA to assess any remaining on-island material-handling equipment, capabilities, and availability. Coordinate the use of, or the leasing of, the available equipment to support the Seaports of Debarkation (SPOD). ▪ Coordinate with FAA, DOD, DHS, and GSA for CONUS based sea-lift support. ▪ Coordinate with Federal departments or agencies for emergency waivers, including: DOT - Hours-of-Service for drivers and size and weight for trucks; DHS -Jones Act; EPA -Fuel-quality; and Initiate other emergency waiver requests to facilitate evacuation, as necessary.
Phase 2b	▪ Coordinate with mass care to provide commodities distribution actions, as necessary and if requested by the Commonwealth. ▪ Coordinate with mass care services to provide transportation for relocation or lodging for sheltering of survivors. ▪ Coordinate with the Commonwealth for the use of intra-island transport modes.
Phase 2c	▪ Identify the additional support that might be needed to supplement or back-fill current response efforts.

4 End State and Stabilization

Multimodal routes (i.e., air, rail, road, port) are cleared of debris and are accessible by standard or alternative means of transport.

Table 6: The Stabilization of the Transportation Lifeline

Lifeline Component	End State	Pre-Incident Planning
Highway and Roadway	▪ Highway and roadway infrastructure are restored, safe, and capable of handling the normal traffic flow.	▪ The identification of high-risk bridges in the National Bridge Inventory that require mitigation efforts.
Mass Transit and Railway	▪ Mass Transit inventory is reestablished, safe, and capable of handling normal bus traffic.	▪ Clearly define PSMAs for ESF #1 assets to be alerted/activated to support assessment of road impacts
Aviation	▪ Airports, airfields, and supporting infrastructure is reestablished and capable of handling normal air traffic.	▪ Clearly define PSMAs for ESF #1 assets to be alerted/activated to assess air traffic control capabilities.
Maritime	▪ Seaports and maritime infrastructure reestablished, fully accessible, and capable of handling normal marine traffic and port throughput.	▪ Clearly define PSMAs for ESF #1 and USCG assets to be alerted/activated to support the conduct of port assessments.

5 Authorities and Potential Waivers

5.1 Authorities

The Commonwealth and Municipal public works departments are responsible for emergency route clearance. The Commonwealth may request support from the National Guard to assist with emergency route clearance. The Commonwealth has contracts with the private sector to provide transportation support, which includes the delivery of fuel, vehicles, trucking, buses, and the services of structural engineers.

- DOT, coordinator for ESF #1, provides a status of transportation pathways and pipelines.
- USACE, coordinator for ESF #3, conducts debris clearance operations.
- FEMA and GSA, coordinators for ESF #7, coordinates or provides transportation assets.
- Defense Coordinating Officer (DCO) and the Defense Coordinating Element (DCE) provide subject matter experts, teams, equipment, and other assets to support the Transportation Lifeline in coordination with FEMA.

5.2 Potential Waivers

An Emergency Declaration by the President triggers the temporary suspension of certain federal safety regulations, including hours of service for motor carriers and their drivers who are engaged in specific aspects of emergency relief and/or provide vital supplies and transportation services in the affected area. Requests for waivers on fuel and hours of service may be made to the Federal Government and the Commonwealth. Waivers on the Transportation Lifeline will be posted on two DOT websites:

- Federal Motor Carrier Safety Administration (FMCSA)
- Federal Highway Administration (FHWA)

Air transport, which is often costly, can be delayed by damage to several components of the airfield: perimeter fencing, lighting, and the traffic control tower. As an alternative, several ports in CONUS have been identified in the Caribbean AHP as ports of departure for supplies going to the Commonwealth.

The Commonwealth is susceptible to a shortfall of shipping vessels based on Section 27 of the Merchant Marine Act of 1920 (Jones Act) restricting travel between domestic port only by US flagged ships. The Department of Homeland Security can issue a waiver of 46 US C. § 55102 (the "Jones Act") pursuant to 46 USC. § 501(a) in the interest of National Security. US Customs and Border Protection can communicate these waivers via its Cargo Systems Messaging Service under the topics of Trade Policy Updates. Information can be found on CBP website:

- US Customs and Border Protection.

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Appendix G-7: Lifeline – Hazardous Materials

1 Introduction

The Hazardous Materials Community Lifeline comprises the facilities and infrastructures that generate hazardous materials and the resources and personnel needed to mitigate their release, including the response and cleanup efforts.

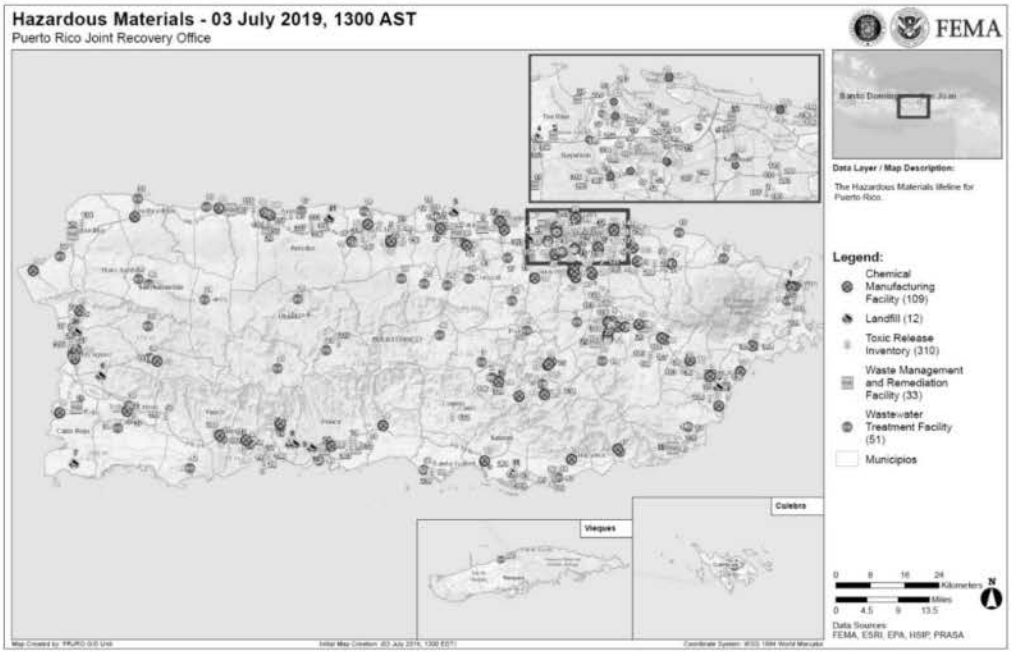

Figure 1: Hazardous Materials Sites

2 Impacts

The degradation and the inoperability of the Hazardous Materials Lifeline in the wake of a hurricane will result in contamination and generate bio-waste, which will jeopardize public health and safety. The release of lower-risk materials and the other impacts of the disaster will also affect public health and the environment (e.g., breaks in oil, gas, and sewer pipelines; contaminated potable water systems; and toxic dust and debris from collapsed buildings). The Response will be hindered by damage to the water, power, and fuel infrastructure. Minor releases of HAZMAT by small businesses, farms, and residences will be swept up in flood waters, which will spread low levels of contamination throughout the area of inundation.

Table 1: Impacts on the Hazardous Materials Lifeline

Lifeline Component	Impacts
Facilities	▪ Because most wastewater facilities will experience at least moderate damage, including an electric power outage, their functions are likely to be restored as soon as electric power is restored. ▪ 20,310 miles of wastewater pipelines will suffer breaks and leaks. ▪ Oil containment facilities will experience at least moderate damage. ▪ There will be leaks and breaks in the 13,540 miles of natural gas pipelines.
Hazardous Materials, Pollutants, and Contaminants	▪ There are 310 toxic release inventory sites throughout the island, of which 7% lie in the southern region while many of the remaining facilities are in low-laying coastal areas near the San Juan metropolitan area. ▪ The hurricane will generate millions of tons of brick and wood debris in addition to the millions of tons of concrete and steel debris.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the CAHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix G-7.

Table 2: Critical Tasks for Hazardous Materials, Pollutants, and Contaminants

Phase	Critical Task(s)
Phase 1a	▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Commonwealth. ▪ Issue regulations through the EPA and the USCG and provide oversight under the federal laws that establish the requirements for the remediation of oil spills and the releases of hazardous materials by local governments, including contingency planning for the needed facilities and vessels.
Phase 1b and 1c	▪ Coordinate with ESF #10 to pre-position equipment and personnel for a rapid response. ▪ Deploy ESF #10's Environmental Response Teams (ERT).
Phase 2a	▪ Source and deploy EPA for HAZMAT surveillance aircraft (ASPECT) to conduct flyover missions of the Commonwealth to determine potential HAZMAT release sites (range of airframe will necessitate indirect flight paths, possible using a Miami to Puerto Rico flight path). ▪ Ensure the health and wellbeing of the traditional and atypical responders engaged in lifesaving and life-sustaining operations. ▪ Provide responders information about safety, restrictions on movement (e.g., traffic), and protective actions to be taken. ▪ Activate the Civil Air Patrol to fly missions to capture images of high-level debris concentrations.
Phase 2b	▪ Source and deploy the full USACE Debris Planning and Response Team. ▪ Contract and deploy debris removal agency if needed for supplementary efforts. ▪ Source and deploy ESF 4 firefighter teams to clear specific roadways (El Yunque)
Phase 2c	▪ Source and deploy re-supply material for deployed teams, as needed.

Table 3: Critical Tasks for Facilities

Phase	Critical Task(s)
Phase 1a	▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Commonwealth. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.

Phase	Critical Task(s)
Phase 1b and 1c	▪ Ascertain the status of critical public facilities, including the number of completed assessments. ▪ Leverage the use of GIS assets (e.g., GeoHealth, which identifies healthcare and emergency medical facilities), that are located within the incident area and can be used to support response operations.
Phase 2a	▪ Request technical assistance from the Occupational Safety and Health Administration (OSHA) under the Worker Safety and Health Support Annex of the National Response Framework (NRF). ▪ Conduct safety briefings on personnel and equipment at all staging areas regardless of activity. ▪ Verify all qualifications, (including medical, etc.) of responders who will be engaged in activities in and around HAZMAT sites and are required to wear personal protective equipment (PPE). ▪ Provide information to responders on safety, restrictions on movement (e.g., traffic), and protective actions to be taken. ▪ Source the USCG VOSS package and local tugs and vessels to facilitate its use. ▪ Execute existing on-island and CONUS emergency and rapid response services contracts for initial support based on the need for spill or release containment.
Phase 2b	▪ Deploy the EPA ERT, the On-Scene Coordinator, and the USCG VOSS package. ▪ Deploy a second ERT and an additional On-Scene Coordinator. ▪ Coordinate with the Commonwealth for temporary storage/disposal sites of HAZMAT. ▪ Provide information, in coordination with ESF #15 and ESF #4, about on-island HAZMAT areas and applicable protective action guidance. ▪ Source and deploy DoD Environmental, Safety and Occupational Health Compliance Assessment and Management Program (ESOHCAMP) teams if needed for supplementary hazard assessment and remediation.
Phase 2c	▪ Source and deploy re-supply material for deployed teams, as needed.

4 End State and Stabilization

All the contaminated sites have been identified and all hazardous materials have been contained.

Table 4: The Stabilization of the Hazardous Materials Lifeline

Lifeline Component	End State	Pre-Incident Planning
Facilities	The capabilities for removing and processing wastewater have been fully reestablished in compliance with environmental statutes and regulations.	Potential wastewater issues are identified, and resources are in place to meet the requirements for the emergency repairs and the restoration of the facilities.
Hazardous Materials, Pollutants, and Contaminants	Coordinated operations involving all levels of government, the responsible parties, and the partner organizations have minimized the public health and environmental risks from oil spills and the releases of hazardous materials.	The appropriate public and private parties actively engaged in pre-incident planning for a HAZMAT release in the affected community.

5 Authorities and Potential Waivers

5.1 Authorities

The EPA and the USCG are the ESF #10: Oil and Hazardous Materials Response coordinators. The EPA, under their own authority, is responsible for the oversight of hazardous materials, including the resources and support to mitigate against hazardous material release, response to such a release, and the cleanup efforts. As the ESF 10 lead, the EPA will coordinate the remediation and removal of hazardous materials generated during the disaster.

5.2 Potential Waivers

- DOT can issue a temporary waiver for Hours of Service for transporting Hazardous Materials during a disaster.
- EPA can issue a waiver that will take effect post-incident for:
  - A No Action Assurance Memorandum that allows the loading and unloading of fuel without the use of vapor recovery or vapor combustion devices at bulk marine loading terminals and truck racks associated with them.
  - A temporary waiver of penalties for excess emissions

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Annex I – U.S. Virgin Islands Hurricane
The Caribbean All-Hazards Plan
U.S. Department of Homeland Security
Federal Emergency Management Agency, Region 2

April 2021

FEMA

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Table of Contents

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Annex I: United States Virgin Islands Hurricane

1 Situation

The United States Virgin Islands (the U.S. Virgin Islands, the USVI, the Territory), one of the FEMA Region 2 Caribbean areas of responsibility, is prone to tropical weather threats. The Territory comprises three large islands, St. Croix, St. John, and St. Thomas, and about 50 small islets and cays. Hurricanes and other tropical cyclones cause life-threatening storm surges, wave actions, extreme winds, landslides, flooding, offshore hazards, and tornadoes. The threats of tropical cyclones are usually identified before hazardous conditions impact the U.S. Virgin Islands, which allows time for protective actions, the deployment of resources, and other pre-landfall preparatory activities. (**Note:** Background information can be found in Annex B: Intelligence.)

In 2017 the U.S. Virgin Islands was struck by two consecutive Category 5 hurricanes, Irma and Maria. The interagency response to hurricanes Irma and Maria presented many firsts for FEMA as an agency and as a coordinating body, including the largest and the longest continuous temporary power, feeding, and air operations missions in FEMA history. Recovery operations are still underway. Even though damages to critical infrastructures are still being repaired, they are operational. This may further challenge a response effort to the next hurricane event.

The geography and the demographic base of the USVI make a "notice" catastrophic response more challenging. The need for an accelerated response is created by limited points of ingress, limited usable land-space, and pre-existing socio-economic conditions.

An overview of the points of ingress follows:

- There are two main airfields, one on St. Croix and one on St. Thomas, and eight identified seaports, which might be available for use during the Response.
- Three seaports are located on St. Croix, two on St. John, and three on St. Thomas. Due to the Territory's limited cargo-handling capacity, containers shipped to the USVI should not be larger than 40 feet. Two seaports, the Crown Bay Cargo Port, and the Wilfred "Bomba" Allick Port, have organic capabilities to support heavy equipment and cargo on-loading and off-loading operations. The other seaports can support logistical operations only if the vessel has loading capabilities or if specialized equipment is brought to these ports.

The rapid assessment of impacts and operability of airports and seaports will facilitate any necessary changes to the planned initial federal resource package. In addition to limited points of ingress, the limited usable land space, many with wetlands that have a high potential for flooding, requires a minimalized federal footprint, to the greatest extent possible, that can still meet operational goals. Additionally, sheltering responders and survivors on a mass scale will be problematic.

1.1 Introduction

Even though the annual hurricane season begins on June 1 and ends on November 30, tropical cyclones can form before and after these dates. The Territory is highly vulnerable to tropical cyclones because of its location in the northeast Caribbean Sea. During the peak of the hurricane

season tropical disturbances move off the west coast of Africa and approach the Caribbean regularly.

The USVI is further east in the Atlantic tropical cyclone formation area than other U.S. interests, which often results in shorter notice for potential impacts than in the Continental United States (CONUS). The USVI could experience catastrophic impacts from the direct strike of a hurricane and moderate to minor impacts of a hurricane, or a less powerful tropical weather system, passing near the Territory.

As an isolated OCONUS island environment, the USVI presents unique logistical challenges requiring specialized air and maritime transport capabilities and additional time for the delivery of CONUS-based resources. The size and scope of hurricane threats can impact every USVI resident. Most survivors remain on the islands throughout the recovery process and will face greater hardships than CONUS survivors who can temporarily relocate to a non-affected area.

(**Note:** More information about the USVI and its district jurisdictions can be found in Annex B to the CAHP: the USVI Profile and the Geospatial Information Center.)

The FEMA Region 2 Geospatial Information Center has created a map viewer, a set of interactive maps and related data, on the FEMA geo-platform (Public Use) for the Region 2 All-Hazards Plan. The map viewer provides useful geospatial information for the public and for responders. This includes maps, journals, and viewers. Information can include a wide variety of static and live layers. Public information is available to view on a public-facing map viewer that anyone can access.

The US Virgin Islands Planning Viewer can be found at the following web address:

https//:

1.2 Purpose

The FEMA Region 2 USVI Hurricane Annex gives a strategic and operational framework for decision-making in the event of a catastrophic hurricane making landfall in the Territory. The scope of Annex I is to stabilize response operations in adherence to the Community Lifeline Construct[1] while providing for inputs into long-term recovery decision making given the geographic separation of the Territory from the CONUS. The primary purpose of Annex I is the rapid application of resources supporting the seven Community Lifelines (the Lifelines), which are necessary to save lives, protect property and the environment, and meet basic human needs in a post-catastrophic incident. The secondary purpose is to maintain public confidence in both the Federal and the USVI Government's ability to respond to and recover from this type of event.

The focus of the annexed framework is to outline the integration with other FEMA Region 2 planning efforts, describe the integration and synchronization of federally defined core capabilities in accomplishing mission-essential tasks in conjunction with whole community partners, integration with the parent plan and the hurricane annex, and complimenting existing

[1] Community Lifeline Construct: provides and outcome-based, survivor-centric frame of reference that assists responders with identifying root causes and distinguishing highest priorities and most complex issues from incident information. For more information, consult the Lifeline Implementation Tool Kit.

national and regional guidance, standards, and plans as outlined in the Authorities Section contained in the CAHP.

1.3 Scenario

The following scientifically feasible, historically accurate, and highly probable threat scenario sets the scene for the processes used in the development of the CAHP.

A tropical storm forms during the first week of September. Within 48 hours the tropical storm builds to a Category 4 Hurricane with sustained winds of 140 miles per hour (mph). In this scenario the tropical storm makes landfall on the east coast of U.S. Virgin Islands as it moves westward at 12 mph. The hurricane has a catastrophic impact on St Croix, St. John, St. Thomas, and Water Island before exiting on the west coast of St. Thomas and heading toward the Commonwealth of Puerto Rico. On higher ground, sustained winds of 178 mph exceed the strength of a Category 5 Hurricane. The Territory could experience a complete power outage affecting 106,400 people. Most of the infrastructure will experience severe damage from the high winds. The hurricane is projected to result in 200 deaths, more than 10,000 injuries, and 800 rescues. 13,000 survivors will need temporary shelter, food, and water. 400 families will be displaced and need long-term sheltering.

1.3.1 General Hurricane Information

Tropical cyclones, which include hurricanes, tropical storms, and tropical depressions, are characterized by a low-pressure center, strong winds, and a spiral arrangement of thunderstorms that produces heavy rain. Tropical cyclones form over tropical or subtropical waters with surface temperatures of 80°F or higher. As warm, humid air rises, it causes an area of lower air pressure below. Air from surrounding areas pushes into the low-pressure area, which, having been fed by the ocean's heat and water evaporating from its surface, causes the storm to grow and intensify.

Table 1: Types of Hurricane

Tropical Cyclone Type	Associated Wind Speed		
	Miles per Hour (mph.)	Knots (kn.)	Kilometers per Hour
Major Hurricane (Cat. 3–5)	111 mph. or higher	96–112 kn. or higher	178 km/h or higher
Hurricane (Cat. 1–2)	74–110 mph.	64– 95 kn.	119–177 km/hr.
Tropical Storm	39–73 mph.	34–63 kn.	63–118 km/h.
Tropical Depression	38 mph. or lower	33 kn. or lower	62 km/hr. or lower

1.3.2 Damaging Winds

Table 2 shows the wind speed and the type of damage that is expected for each category on the Saffir-Simpson Hurricane Wind Scale.

Table 2: The Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed	Types of Damage
1	74–95 mph.	Very dangerous winds produce some damage: ▪ Well-constructed frame homes could suffer damage to roof, shingles, vinyl siding, and gutters. ▪ Large branches of trees could snap, and shallowly rooted trees could be toppled. ▪ Extensive damage to power lines and poles is likely to result in power outages that could last for several days.
2	96–110 mph.	Extremely dangerous winds that cause extensive damage: ▪ Well-constructed frame homes could sustain major damage to roof and siding. ▪ Many shallowly rooted trees could be snapped or uprooted, blocking many roads. ▪ Almost total loss of power is expected with outages that could last from several days to weeks.
3 – Major	111–129 mph.	Devastating damage occurs: ▪ Well-built framed homes could sustain major damage to or the removal of roof decking and gable ends. ▪ Many trees could be snapped or uprooted, blocking many roads. ▪ Electricity and water are unavailable for several days to weeks after the storm passes.
4 – Major	130–156 mph.	Catastrophic damage occurs: ▪ Well-built framed homes could sustain severe damage with loss of most of the roof and some exterior walls. ▪ Most trees are snapped or uprooted, and power poles are downed. Fallen trees and power poles in residential areas isolate the survivors. ▪ Power outages last weeks or months. ▪ Most of the area is uninhabitable for weeks or months.
5 – Major	157 mph or higher	Catastrophic damage occurs: ▪ A high percentage of framed homes are destroyed, including the total failure of the roof and the collapse of walls. ▪ Fallen trees and power poles in residential areas isolate the survivors. ▪ Power outages last for weeks or months. ▪ Most of the area is uninhabitable for weeks or months.

1.3.3 Storm Surge and Wave Action

Storm surge is the abnormal rise of ocean water above predicted tide levels. Storm surge is mostly produced by the force of tropical cyclone winds pushing ocean water onshore. The degree of flooding from storm surge is affected by slight changes in the storm's track, intensity, forward speed, size, angle of approach, central pressure as well as the shape and characteristics of bays and other coastal features.

Figure 1: The Vulnerability of the U.S. Virgin Islands to Storm Surge

1.3.4 Assumptions

The following assumptions apply to Annex I:

- Region 2 will take an aggressive, forward-leaning posture, which will begin with obtaining early Situational Awareness of the track and intensity of the tropical cyclone before requesting federal support from other jurisdictions in Region 2.
- A decision will be made when to transition primary Incident Support from Region 2's RRCC to the NRCC before H-96 hours.
- During the hurricane season, there will be a pre-designated Federal Coordinating Officer, a National Incident Management Assistance Team, an additional IMAT, and designated field leadership. The Region 2 IMAT will be postured to support the USVI.
- The incident will produce cascading effects.
- Resources will not reach the entire affected population.
- A portion of the designated shelters will be damaged or destroyed. Federal support to survivors who do not evacuate will be required, including:
  - Shelter operations (Including at-risk populations);
  - Subsistence operations; and
  - Search and rescue operations.
- Mass care services will be quickly overwhelmed by many survivors, including at-risk populations (e.g., persons with minor injuries, children, seniors, persons with physical,

sensory, cognitive, behavioral, and/or chronic conditions, and persons who use personal assistance services [PAS]).

- The emergency medical evacuation of critical patients will require federal support.
- A catastrophic hurricane will impact neighboring Caribbean Islands and close major airports that have the capacity to facilitate the federal response. Airports on USVI might not be available for federal response activities during the first 72 hours or longer.
- If a hurricane has catastrophic impacts on both Puerto Rico and the USVI, there will be competing demands for limited federal resources.
- Many first responders will also be survivors, many of whom will attend to family matters before reporting for work.
- Some communities and large segments of the population will be isolated from support resources due to impassable primary roads.
- Local medical facilities will not be able to meet all healthcare needs of the population.
- The opening of airports and seaports will require Federal assistance.
- A major fire or fires will overwhelm already stressed fire departments.
- There will be a limited number of qualified inspectors to support assessments of both public and private infrastructures.

1.3.5 Key Considerations

The following are Key Considerations in planning for the Response to an incident:

- A Category 3, 4, or 5 Hurricane will require the mobilization and deployment of federal assets before the onset of tropical winds.
- Location of FCO, IOF, and JFO.
- Determination of specific national-level logistics and supply-chain-management capabilities.
- Personnel deployed by federal departments and agencies will require temporary housing, food, fuel, sanitary services, and water during response operations.
- The number of healthcare facilities impacted or damaged and number of healthcare facilities that need generator or other power assistance.
- The status of local area government communications critical infrastructure.
- The extent of damages to private sector communications critical infrastructure.
- Major highways, bridges, airports, and seaports will be damaged and closed to traffic.
- The status of the power grid and power plants and the estimated time until restored.
- The number of water and wastewater facilities damaged, destroyed, or without power.
- The number of leaks, spills, and/or releases of hazardous materials any potential releases from facilities, vessels, pipelines, and other sources.
- Major roadways, bridges, airports, and seaports will be damaged or closed to traffic.
- The number of local fire stations that are without power or damaged, flooded, or destroyed.

- Computer and communications systems, which incorporate electronic information, networks, and their services within the area affected by the incident, could be inoperable, degraded, or include features that prevent local and federal collaboration.
- The interdependent nature of infrastructure systems and the complexity of the impacts on them will require coordination among a broad range of stakeholders to assess, set priorities for, secure, and restore the affected systems.
- Utility outages (e.g., water, petroleum, electricity) in the affected area and the estimated time until restoration.
- The status of releases of fuel from the reserves to meet the survivors' requirements (e.g., for cars, generators).
- Population requiring lifesaving and life-sustaining support, including food and emergency supplies.
- Human and animal diseases and illnesses could develop in the affected area.
- The impact of the incident on agriculture and natural resources.
- The number of buildings damaged or destroyed, the number of buildings without power, the number of the injured, and number of fatalities.

1.3.6 Planning Factors

To calculate estimates of impacts, detailed research was conducted, which included an analysis of the physical effects of previous incidents on the survivors and disaster modeling.

Table 3: Planning Factors

Standardized Impact	Standardized Impact Value
Districts affected	3
People with limited English proficiency affected	2,900
Partner organizations involved with incident management	8
Safety and Security	
Structural fires	2
People requiring rescue	2,200
Damaged natural and cultural resources and historical properties registered in the affected area	36
Food, Water, Shelter	
People affected	107,000
People with access and functional needs (19% of the population)	20,300
People requiring food and water	107,000
People with access and functional needs requiring food and water	20,300
Animals requiring shelter, food, and water	1,000
People requiring evacuation (50% of the population)	53,500
People with access and functional needs requiring evacuation	10,100
People requiring long-term housing	3,200
People with access and functional needs requiring accessible long-term housing	600
People requiring a shelter	15,500
People with access and functional needs requiring an accessible shelter	2,900
People requiring temporary, non-congregate housing	2,200

Standardized Impact	Standardized Impact Value
People with access and functional needs requiring accessible, temporary, or non-congregate housing	420
Customers without wastewater service	11,500
Customers without potable water service	15,500
Businesses closed because of the incident	19,200
Health and Medical	
Affected healthcare facilities and social service organizations	17
People requiring medical care	110
Fatalities	> 10
Energy	
Customers (without power service)	55,500
Communications	
Customers (without communications services)	76,000
Transportation	
Miles of road affected	1,100
Hazardous Materials	
Sites of the release of hazardous materials	39
Exposed individuals from hazardous materials incidents	2,500

2 Mission

In response to catastrophic events resulting from a hurricane, FEMA and its Federal partners will support the Government of the USVI through Community Lifeline implementation. This construct maximizes the effectiveness of federally supported, territorial managed, and locally executed response.

3 Execution

The Federal Government will coordinate with its Whole Community partners to incorporate the lifeline construct to deliver the critical services within a community that must be stabilized or re-established. FEMA executes Lines of Effort (LOE) to operationalize the Core Capabilities (the ways) for response and recovery planning and operations.

3.1 Senior Leaders' Intent

FEMA Region 2 Senior Leaders' intent for emergency operations on the USVI includes:

- Ensure the timely, effective, and coordinated response of a unified coordination structure in support of the USVI.
- Save lives and sustain the health and safety of the people of the USVI.
- Initiate immediate actions to stabilize the Community Lifelines in the USVI.
- Ensure the safety of responders and other personnel throughout the disaster's lifecycle.

Regional Administrator's Vision:

Stabilization of Community Lifelines that alleviate immediate threats to life and property when communities are impacted by disasters.

- Coordinate with partner organizations to provide nationwide unity of effort in preparing for, responding to, and recovering from a disaster in the USVI.

3.1.1 Desired End State

A successful response will not be measured in terms of the time elapsed or the amount of resources expended. It will be measured in terms of meeting the objectives outlined in this annex and establishing certain conditions on the ground. The conditions that determine a successful response and the transition to the recovery are:

- All survivors are accounted for, have received emergency first aid or medical assistance, have access to food and water, and are receiving individual assistance in accord with the Disaster Declaration, which includes, but is not limited to, crisis counseling, the provision of mass-care comfort kits, and support for the reunification of families.
- No visitors are stranded on the USVI.
- Survivors have returned to their home or have an adequate shelter, including persons with access and functional needs and persons with household pets and service animals.
- The environment in the affected area has been stabilized; the leaks and spills of hazardous materials have been contained or stabilized.
- Essential government functions are operational.
- Critical Infrastructure and Key Resources (CIKR) have been restored and are operational.
- The mass fatality response has been completed.
- The conditions for the resumption of commerce on the USVI, including tourism, have been met.

3.2 Information Requirements

3.2.1 Region 2 Information Requirements

Region 2, in coordination with federal, territorial, and other agencies, will gather, analyze, and disseminate intelligence regarding the characteristics, the predicted impacts, and the actual impacts of a hurricane. The intelligence will be analyzed and disseminated to assist in the determination and execution of prospective courses of action for sheltering, mass care, and the other initial response operations. This information will include the hurricane's footprint, its immediate and cascading effects, and its impact on the affected population and infrastructure. The intent of this process is to provide the decision-makers with clear, timely, and accurate information about the incident and other simultaneous or nearly simultaneous incidents, which supports timely judgements that will influence the response to one or more incidents. The following assumptions apply to the information requirements for a tropical cyclone.

- Region 2 will retain the ability to gather, assess, analyze, and disseminate critical information and to develop a Common Operating Picture (COP).
- Region 2 will retain the ability to coordinate the federal response to a hurricane.
- The primary source for tropical weather systems forecasts is the National Oceanic and Atmospheric Administration’s (NOAA) National Hurricane Center (NHC) in Miami, Florida.

- The National Hurricane Center and entities of the National Weather Service (NWS) develop and publish several graphical and text products that provide up-to-date information and analyses of potential and active tropical weather systems that could affect the USVI.

The Threat Analysis Unit (TAU), which complements the Region 2 Watch, is tasked with analyzing information used to determine trends, outcomes, and impacts. Region 2 will transition the development of intelligence operations from steady-state operations to event-focused activities. FEMA will maintain Situational Awareness through WebEOC and prescribed reporting mechanisms to ensure rapid action in response to an emergency or a disaster occurring simultaneously with the incident. The priority is to obtain situational awareness through a Common Operating Picture. The analysis of critical information, including a forecast of the hurricane's intensity, is not a precise science. Therefore, an analysis of threats and hazards is often based on objective data, such as plans and capability assessments, and subjective data, such as the experience acquired from previous incidents. Additional inputs include, but are not limited to, the following:

- Available data on the Territory's capacity, such as plans, identified threats and hazards, risk assessments, stakeholder preparedness reviews, and after-action reports from previous events;
- The actual or anticipated impact of the incident based on predicted areas affected or previous disaster events of a similar nature;
- The actual or anticipated requests for assistance, such as a Presidential Emergency Declaration or a Major Disaster Declaration from the Governor of the USVI;
- Reports from FEMA Region 2's Hurricane Program Manager (HPM), who is deployed as a liaison to the National Hurricane Center in Miami 96 to 48 hours pre-landfall.

3.2.2 Private-Sector Information Requirements

Region 2's Private Sector Liaison (PSL) will serve as the primary liaison between FEMA and the private-sector stakeholders in the USVI in conjunction with ESF #14 and the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA). The PSL will:

- Reach out to and communicate with the Territory's emergency management partners as well as its Chamber of Commerce, industry associations, large employers, and academia to support priorities and objectives for private-sector resiliency and business continuity.
- Identify private-sector resources and capabilities before, during, and after a disaster to support response operations and regional planning efforts.
- Coordinate with FEMA Headquarters' Office of Response and Recovery (ORR), Office of Business, Industry, and Infrastructure Integration (OB3I), the National Business Emergency Operations Center (NBEOC), and other federal agencies in support of private-sector integration, the stabilization of the Lifelines, and the continuous operation of critical business and government functions.

3.2.3 Information Collection

Personnel in the Regional Watch, Planning Section (when activated), Liaison Officers (LNOs), and supporting TAU will develop and use Essential Elements of Information (EEIs) and

Regional Administrator-directed Critical Information Requirements (CIR) to guide information gathering and intelligence production. EEIs and CIRs are developed in conjunction with Regional leadership and are included in Regional deliberate and incident-specific plans. Threat Supplement to this annex focuses on hurricane and/or hurricane-specific incident CIRs and EEIs.

3.2.4 Sources of Information

The Regional Watch, Planning Section, and other sources provide critical information on hurricanes. Table I4 contains sources to obtain required information for analysis and dissemination.

Table 4: Hurricane Response Resources

Source	Products	Scope
National Hurricane Center (NHC)	Tropical Weather Outlooks Tropical Cyclone Advisory Packages	Tropical weather outlooks provide the locations and the probabilities for a potential tropical cyclone. Advisory packages for active storms include official text and graphics that provide of the track and intensity forecasts, public advisories, forecast discussions, wind speed probabilities, storm surge forecasts, and other information every six hours. Intermediate and special advisories are issued, when required. Link: https://www.nhc.noaa.gov/
NWS Weather Prediction Center (WPC)	Quantitative Precipitation Forecasts (QPF)	Graphics display the expected cumulative rainfall in the United States for periods up to seven days. Link: https://www.wpc.ncep.noaa.gov/qpf/qpf2.shtml
NWS Local Weather Forecast Offices (WFO)	Local Statements about the Hurricane	The WFO provides an overview of a storm's local effects, including expected weather conditions, decisions on evacuations made by local officials, and the precautions taken to protect life and property. Caribbean WFO Link: https://www.weather.gov/sju/
Hurricane Evacuation Study (HES)	Technical Data Report	The HES provides technical information about areas vulnerable to hurricane hazards, hurricane evacuation zones, population and infrastructure vulnerabilities, behavioral findings, and assessments of shelter capabilities as well as traffic management and other transportation factors for evacuation. Link: https://hvx.hurrevac.com/hvx/
HURREVAC (HVX)	Web-Based Platform	HVX provides geospatial tracking of tropical cyclones, forecasts, and a decision-support platform for evacuations that combines live feeds of NHC and NWS forecasts with clearance times for evacuations to assist emergency managers in determining the deadlines for decisions about evacuations and the expected impacts of the storm. Link: https://hvx.hurrevac.com/hvx/
Hazards US (HAZUS)	Combined Hurricane and Flood Modelling	HAZUS is a GIS modeling tool to estimate the potential losses and the physical, economic, and social impacts of a disaster. Graphics illustrate the limits of the identified high-risk locations. HAZUS estimates damages to and loss of buildings, facilities, costs for repairs, quantity of debris, shelter requirements, loss of use, and direct costs from loss of function. Link: https://www.fema.gov/hazus

3.3 Concept of Operations

VITEMA and FEMA Region 2 provided operational support to the Territory's affected Districts by deploying resources and capabilities in a timely manner to support the response, save and sustain lives, and prevent human suffering.

District Emergency Operations Centers submit resource requests to VITEMA, which will either fulfill the request from the Territory's capabilities, including the activation of EMACs, or submit a Resource Request Form to FEMA. Once approved, FEMA will use internal inventory,

processes procurement actions, or issues a Mission Assignment (MA) to another federal agency with the required capability.

The designed annex establishes a coordinated framework for the regional support of the initial federal resource push[2] model in in response to the pre-planned trigger point for a Category 4 Hurricane impacting the USVI and the anticipated needs. The established framework also supports the delegation of the authority for the response to Region 2 and the transition to a resource pull model, based on actual needs (Figure 2 on page 12). This framework describes the necessary integration and synchronization of the Federal Government and the stakeholders on the USVI to support the delivery of the defined Core Capabilities through mission-essential tasks that support the objectives and goals of the response by pairing these with the assets needed to accomplish the mission.

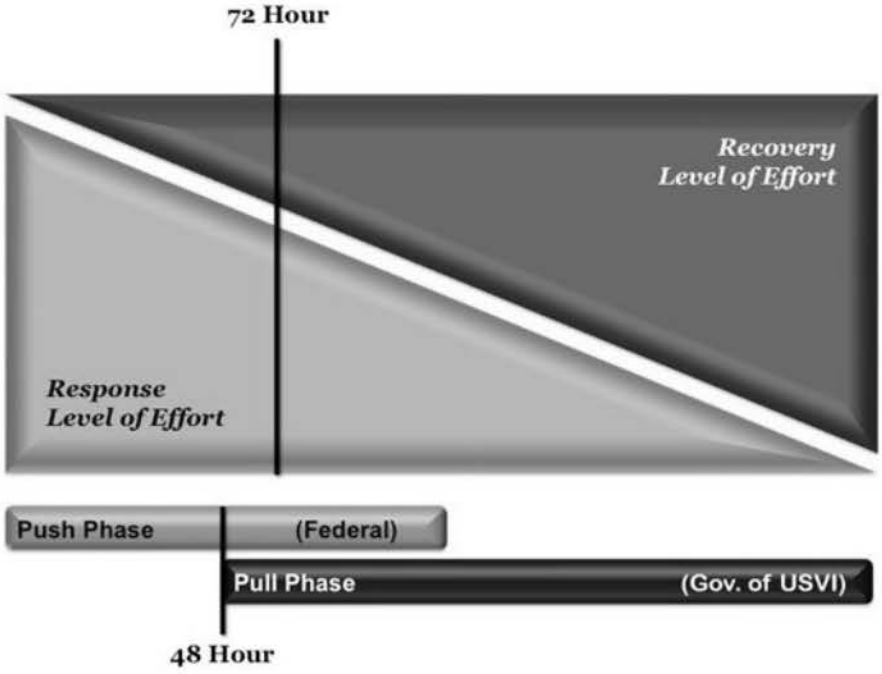

Figure 2: Push/Pull Framework

In addition to the push/pull logistics concepts, a phased approach to the response,[3] will be used. This will be organized in three phases:

- Phase 1 (Pre-Incident – Normal Operations) includes activities that take place before an incident to support or enhance planning and preparation efforts.
- Phase 2 (Response) begins at the validation of the event and ends with the demobilization of lifesaving operations, the downsizing of response operations, and the initiation of the transition to Recovery.
- Phase 3 (Recovery and Restoration Operations) is not addressed in the Caribbean AHP. Information about Phase 3 can be found in the National Disaster Recovery Framework for Long-Term Recovery.

[2] The Federal Response to Hurricane Katrina: Lessons Learned, THE Government Accounting Office, February 2006
[3] Regional Planning Guide, Department of Homeland Security and the Federal Emergency Management Agency, Second Edition, 2010

Table 5: Response and Recovery Operational Phases

Phase 1			Phase 2			Phase 3		
Pre-Incident Operations (Planning, Preparation, and Mitigation Activities)			Post-Incident Operations			Recovery and Restoration Operations		
1a	1b	1c	2a	2b	2c	3a	3b	3c
Monitor Threat	Elevated Threat	Credible Threat	Immediate Response	Community Stabilization	Sustained Operations	JFO Program Delivery	Long-Term Recovery Operations	Regional Closeout

3.3.1 Phase 1: Pre-Incident Operations

Phase 1 covers all pre-incident operations, including steady-state emergency management activities before potential threats can be identified and actions taken in advance of the hurricane's impacts.

- Phase 1a is associated with steady-state operations, in which FEMA Region 2 continuously monitors available sources to get information about threats that might have an impact on the Region 2 Caribbean Area. Other steady-state emergency management activities focus on normal preparedness and hazard mitigation.
- Phase 1b is associated with the increased likelihood or the elevated threat of natural hazards and the development of Situational Awareness. Pre-selected teams are placed on alert and could be activated.
- Phase 1c is associated with the near certainty of natural hazards or credible manmade threats. Resources are pre-positioned in anticipation of Caribbean support requirements.

Notice Event:
Due to the nature of notice incidents, assessment and response is deliberate. An example of this type of event would be a tropical storm/hurricane. In accordance the operational phase approach, there is time allotted for pre-incident planning (phases 1A-1C). The execution checklist for this type of event is listed in the Caribbean All-Hazards Plan (Annex X: Execution Checklist) and WebEOC.

Search: WebEOC – Menus - Libraries - Execution Checklist Library

3.3.2 Phase 2: Post-Incident Operations

Phase 2 focuses on an immediate Federal response to save lives and support survivors, their communities, and the affected government following a disaster. Phase 2 begins as soon as the disaster impacts the USVI.

- Phase 2a begins at the time of the incident in conjunction with notification from the National Weather Service (NWS) and National Hurricane Center (NHC). Initial actions include the deployment/employment of resources and capabilities throughout the islands in order to support known resource requirements for territory and district lifesaving operations. Resources will deploy simultaneously to one or more ISBs to conduct Reception, Staging, Onward movement, and Integration (RSOI), provide just-in-time training, and build toward

providing stability based on state-identified priorities and situational awareness. Targeted life-sustaining and assessment of critical infrastructure will be initiated within the impacted area to establish infrastructure for tactical response. Subsequently, air, ground, and maritime avenues of approach will be assessed to evaluate operational and logistic capabilities. Tactical ground, air and maritime main supply routes will be established to facilitate operations and fulfill logistical support requirements, based on territorial priorities, objectives, and situational assessment.

- Phase 2b begins with the establishment of an IOF in the Territory. Priorities for this phase include rapidly assessing and repairing critical infrastructure to expand support capabilities for the impacted population, based on territory priorities. Staging area operations will be expanded throughout the impacted area. Additional responders, assessment & repair teams, and other life-sustaining resources will be deployed to increase access. All levels of support should expand throughout the impacted area. Response emphasis will initially focus on population centers and survivor collection points, and will expand as the situation, infrastructure, and capabilities allow.

Commodities distribution within USVI occurs through 2 regional staging areas. Federally supplied commodities will enter through the primary points of ingress of Charlotte Amalie, St. Croix and then be delivered to one of the two regional staging areas, the National Guard Bases on St. Thomas and St. Croix. From there to the assigned PODs, by Government of USVI.

The type and the quantity of commodities needed will be reported by the POD's to VITEMA at the District EOCs, which will then forward the request to the IOF and the JFO, where the requested commodities will be procured or released.

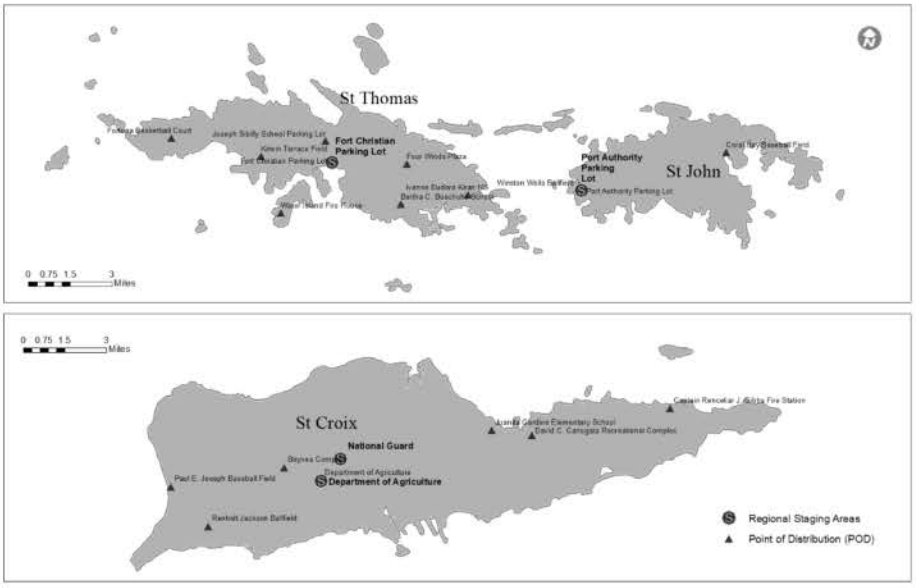

Figure 3: Locations of Resource Staging Areas in the U.S. Virgin Islands in June 2020

Figure 3 is not based on a scenario. It depicts a hypothetical response, the intent of which is to demonstrate the process, including the possible potential failures that may arise due to the infrastructures impacts from the hurricane.

- Phase 2c begins with the completion of lifesaving operations. The priorities for Phase 2c are to begin the transition from a life-sustaining tactical response and short-term recovery operations and to setting the stage for long-term recovery. According to the Territory's priorities, essential public services will be expanded to include the provision of food, water, power, fuel, communications services, more transportation routes and modes, and the relocation and long-term shelter options for survivors displaced by the incident.

  In Phase 2c temporary and permanent restoration efforts will be expanded. The continued stabilization of the critical infrastructure associated with sustained response operations and intermediate recovery and mitigation will also be expanded. Restoration and stabilization efforts will include the delivery of Stafford Act programs, the completion of a Recovery Support Strategy, the provision of accessible interim housing, the making of plans for the immediate infrastructure repair, and the restoration of private-sector CIKR.

3.3.3 Phase 3: Recovery and Restoration Operations

Phase 3 refers to recovery activities that occur as a part of the Response mission area to facilitate the transition and support to the Recovery mission area. Phase 3 includes short-term recovery operations (e.g., the repopulation of the affected area) and long-term recovery operations (e.g., the transition to ongoing recovery and mitigation activities).

- Phase 3 begins with support for the territorial and the private-sector jurisdictions in which federal actions are engaged to restore services, continue governmental operations, and promote economic recovery. All lifesaving activities have been completed, and the groundwork has been laid to support long-term recovery by assisting individuals, restoring critical infrastructures, and essential governmental and commercial services. Phase 3 will overlap with Phase 2. This phase will not be addressed in the CAHP. Information about long-term recovery operations can be found in the NDRF.

3.4 Community Lifelines

Community Lifelines are indispensable services that enable the continuous operation of critical business and governmental functions and the sustainment of life. If these services were compromised and not properly secured and stabilized, human health and safety or national economic security would be at risk. A careful analysis of the status of the Lifelines is essential for an effective response to an incident. The Lifeline Stabilization Cycle provides a framework for integrating the Lifelines into response operations by using a five-step process.

1. Assess the stabilization of the Lifelines based on the impacts of the incident.

Figure 1: Lifeline Stabilization Cycle

2. Identify interdependencies among the Lifelines and set priorities for the employment of resources.
3. Identify the limiting factors and resource gaps based on the way that these resources are aligned.
4. Develop and implement courses of action (COA) with the corresponding requirements for resources as soon as this analysis has been completed.
5. Reassess the direction or stay the course based on lessons learned, updated assessments, and conditions on the ground.

Focusing on the stabilization of the Lifelines is a priority for all levels of emergency management. Stabilizing the incident will better align the activities of the Emergency Support Functions, the Sector-Specific Agencies, and the critical private-sector partners that have to deliver national unity of effort for planning, reporting, responding to, and recovering from a disaster. Long-term recovery and a return to normalcy cannot occur until the end-state of each Lifeline has been achieved. The seven Community Lifelines are Safety and Security; Food, Water, Shelter; Health and Medical; Energy (Power and Fuel); Communications; Transportation; and Hazardous Materials.

3.4.1 Lifeline – Safety and Security

The evacuation and the protection of the affected population is a component of the Safety and Security Lifeline. Federal support for mass evacuations will be provided at the territorial or the district level and scaled to the incident. Due to the unique geography of the USVI, evacuating the survivors will be challenging.

Survivors should shelter in place. Evacuees with private transportation, including evacuees with disabilities and access and functional needs, should go to the shelter designated by the Territory's authorities. Evacuees will be triaged and registered in a tracking system by the Red Cross or the Department of Defense. Federal support for self-evacuees might include supporting the Territory's congregate-care efforts. Federal support might also be needed to assist survivors in non-traditional shelters, who are unwilling or unable to return to their home.

As soon as the Territory's authorities determine that evacuees can safely return to their home and that vital infrastructure has been restored, federal responders will begin to support the return of evacuees who need assistance with transportation to the affected area.

- **Law Enforcement and Security:** Police stations are expected to have at least minor to moderate damage. Additional damage is expected at prisons, which could require additional law enforcement officers. Federal Law Enforcement Officers (FLEO) will be sent to the USVI if the Territory requests additional support.
- **Fire Service:** There will be multiple structure fires resulting from the hurricane.
- **Search and Rescue:** Collapsed structures, storm surge, debris, and downed trees and power lines will require search and rescue and firefighting support. Damages in the impacted area

and the cascading impacts on essential services and critical infrastructure will cause panic and fear among the survivors. USAR elements (Type 3 Teams with 35 pax each) will be deployed to the USVI and staged in anticipation of requests for assistance. USAR Incident Support Teams will coordinate with the IMAT to get security support with the QRT.

- **Government Service:** The Territory's district governments will be open or closed depending on impacts from the event. ESF #11 will monitor requests for assistance and work to identify the impacts of the hurricane on natural and cultural resources. The Heritage Emergency National Task Force will collaborate with the Crowdsourcing Team of the National Response Coordination Center (NRCC) to identify the impacts on historic and cultural resources.
- **Community Service:** An Infrastructure Assessment Team will be sent to the IOF. USACE will provide technical assistance to local inspectors at the potentially impacted public levee.

3.4.2 Lifeline – Food, Water, Shelter

A hurricane will make estimating shortages of critical resources, including commodities, food, water, trained personnel, sheltering, and warehousing, much more difficult.

- **Food:** Many large grocery stores will be forced to operate on generator power, if they are even open. The reopening of grocery stores could be delayed until they can restock and repair structural damage. The delivery of food to the PODs, which will require the rapid development of a supply chain, will support the displaced population during the stabilization of the incident, if local food markets are closed.
- **Water:** Contract support will provide a pre-positioned one-day water supply. Water will be stored in the Caribbean Distribution Centers and a warehouse on St. Croix if support is requested.
- **Shelter:** Strategically placed shelters for 15,500 survivors will be needed. Due to cultural norms in the USVI, a family unit may include extended family members and members of the community. Therefore, larger tents might be necessary. Non-traditional shelters will also be a needed for survivors who may be afraid to return home, even if it is safe to do so.
  - Comfort kits will be distributed by the Red Cross.
  - Mental Health Teams from the Department of Health will provide mental health and some physical health services, spiritual care, and casework. Information about damages will be available on the Disaster Distress Helpline.
- **Agriculture:** 1.8% of the population is employed in the agriculture sector. Due to land subsidence and inundation, the output of this sector could be reduced for up to a year after the hurricane.

3.4.3 Lifeline – Health and Medical

Because of damage to the electric grid and the resulting loss of power, an increase in diseases from a lack of sanitation, increased demands on the healthcare system, and the loss of medical facilities is likely to occur in the impact area. Portable dialysis units might be required for patients who cannot be evacuated to Puerto Rico or CONUS. Many hospitals will have to rely on generator power.

- **Medical Care:** Two healthcare facilitates are expected to have damages greater than 50%. More than 100 persons will require hospitalization. DMAT will be on call. A liaison from the Assistant Secretary for Preparedness and Response (ASPR) will be sent to the U.S. Virgin Islands. The Office of Resource Management (ORM) will identify the available DMAT Caches in CONUS for use by the DMAT, if requested. An HHS liaison will report to the USVI JFO as soon as it has been established.
- **Patient Movement:** The evacuation of medical facilities might have to be ordered. Federal support through the FEMA's National Emergency Medical Services Contract might be needed. The National Ambulance Contract might be needed to sell vehicles to FEMA for OCONUS activities.
- **Public Health:** The impacts of the hurricane on the survivors will include more than physical injuries. Therefore, the psychological impact of the disaster will have to be addressed. Mental Health Teams from the Territory's Department of Health will have to be deployed to counteract the stigma that could be associated with seeking such help.
- **Fatality Management:** 10 immediate fatalities are likely with many more expected because of the cascading effects from accumulated debris, the loss of power and potable water, and the limited availability of medical care. DMORT will be deployed to assist in the management of human remains.
- **Medical Supply Chain:** The destabilization of the ports of departure will have a cascading impact on the medical supply chain.

3.4.4 Lifeline – Energy (Power and Fuel)

Power outages and interruptions in the fuel supply and networks for transmitting and distributing it are likely to occur throughout the Territory.

- **Power:** There are two major electric-power facilities, both with minor capacity solar energy backups, in the USVI. A power outage across the entire Territory with considerable damage to the electric grid, including both the transmission and the distribution systems, is expected. The outage, which could be caused by the hurricane, but might be exacerbated by a steady-state system already at risk. The average age of facilities owned by the Western Area Power

Administration (WAPA) is more than 24 years. Power generation plants have shifted from using diesel fuel to petroleum and propane, however, if necessary, they can be returned to diesel for operational use. Plants that burn residual fuel oil are limited in capacity as they must comply with the Mercury and Air Toxic Standards (MATS), the Consent Decree of the U.S. Environmental Protection Agency (EPA), and obtain other environmental permits. FEMA will support the mobilization of Temporary Power Teams and the deployment of Department of Energy (DOE) personnel for status assessments, reporting, and needs assessments.

- **Fuel:** If unaffected, the Limetree Bay Refinery in St. Thomas, the largest refinery in the western hemisphere, can support the anticipated fuel needs for as many as 350 generators. The burn rate could be in excess of 35,000 gallons per day for up to 60 days. An interruption in the fuel supply and the transmission and distribution networks is expected in the wake of a hurricane.
  - Imported fuel for St. Thomas will arrive in the Port of Charlotte Amalie or by the Berge Summit, a liquid propane gas tanker, and be off-loaded for WAPA to smaller ships in Krum Bay.
  - Imported fuel for St. Croix will arrive in the Port of Christiansted. Excess fuel will be stored at Estate Richmond.

3.4.5 Lifeline – Communications

Communications nodes, including landline and cellular services in the impacted area, are likely to be overloaded or damaged. Outages due to a loss of commercial power are likely, resulting in a heavy reliance on generator support.

- **Infrastructure:** Extended power outages will limit the availability of the Internet, cell phones, and non-battery radios. The communications nodes in the more remote areas of the USVI might have to be assessed. Getting access to these areas for fueling, repair, and watering could be difficult if the nodes are operating on generators.
- **Alerts, Warnings, and Messages:** The capacity and the capability of the Territory's Districts to communicate with the affected population will be a major concern, especially if more evacuations are required. IMAT Communications Specialists, MERS Teams, and necessary equipment will deploy to these remote locations if conditions permit. Satellite equipment will be activated, and FEMA radio networks assessments will be undertaken. Spanish speaking community relations specialists will also be deployed.
- **911 & Dispatch:** Survivors in areas where telecommunications services are not available will not be able to call 911. Survivors residing on St. John and St. Croix should call the local emergency number for their island as a call to 911 might be forwarded to the wrong island.
  - St. Croix – Police: 340-772-9111, Fire: 340-772-9111
  - St. John – Police: 340-693-8880, Fire: 340-776-6365, Ambulance: 340-776-6222

- **Responder Communications:** Because Situational Awareness will be difficult to obtain and disseminate, building a Common Operating Picture and coordinating response efforts will be challenging. These challenges will complicate efforts to deploy and employ resources effectively; however, Federal responders will have access to satellite telephones and point-to-point systems to ensure effective communications throughout the response.
- **Financial Services:** Financial institutions will be affected by the hurricane. Because of power outages, the banking system will not be able to dispense cash from automated teller machines. Infrastructure damage will impact the banks, and power outages will limit the ability of the survivors to use their credit and debit cards.

3.4.6 Lifeline – Transportation

Landslides, flooding, accumulated debris, and downed trees and power lines will challenge post-incident response operations by limiting the capacity of highways, roads, airfields, and ports.

- **Highways and Roadways:** Thousands of tons of debris will be generated, which will block more of the already obstructed highways and roadways, limiting the transport of durable goods and commodities to the areas of impact. At least 1,100 miles of road will be affected by the hurricane.
- **Mass Transit:** The USVI bus system VITRAN operates on St. Croix, St. John, and St. Thomas. Its limited inventory of vehicles could be reduced by the hurricane. Debris blocking bus routes will further affect operations.
- **Aviation:** The Cyril E. King Airport should be partially operational within the first seven days unless the hurricane makes a direct strike on the USVI. The opening of the Henry E. Rohlsen Airport on the southern part of St. Croix will depend on an assessment the cascading impacts of the hurricane and/or the probability of a second strike.
- **Maritime:** All seaports will remain closed for the first three days. Then seaports that were not directly affected by the hurricane will reopen. Seaports that were directly affected might be closed for 90 days or longer to clear debris and hazardous materials. Closures or restrictions to daylight hours could occur. A side-scanning sonar unit will be deployed by USACE to support clearing the seaports by the United States Coast Guard (USCG). The USCG will assess the impact of the hurricane on the seaports as soon as possible – conditions permitting. Ferry services between St. Croix and St. Thomas and between St. Thomas and St. John will feel the initial impact of the hurricane and not be able to reopen until this assessment can be completed.

3.4.7 Lifeline – Hazardous Materials

Concerns about environmental and hazardous materials include an outbreak of diseases caused by the contamination from flooding and the leaching of toxins (e.g., untreated wastewater, chemicals, petroleum products). Wastewater systems might have to be shut down because of the loss of power or damage to the infrastructure.

- **Facilities:** The USVI has five chemical manufacturing plants, three landfills, and eight wastewater treatment plants that could be affected by the hurricane. Most of them have primary and secondary containment systems.
- **Hazardous Materials, Pollutants, Contaminants:** The toxic release inventory site on St. Thomas could contaminate potable water systems and cause environmental damage to the Territory's native species.

3.5 Key Decisions and Actions

The key decisions that must be made by the Regional Administrator during the response to a catastrophic hurricane on the USVI will include but are not limited to:

- The activation and staffing of the RRCC;
- The expediting of a recommendations to the President for an Emergency or a Major Disaster Declaration for a catastrophic hurricane in the USVI;
- The adjudication of resources among FEMA Region 2's jurisdictions, if applicable; and
- The transfer of operations from the RRCC and the NRCC to the JFO.

4 Administration Resources and Funding

Information on Administration, Resources, and Funding is outlined in the Caribbean AHP Base Plan. Region 2 will use surge funding to support the initial notice push for a hurricane.

5 Oversight and Coordinating Instructions

This annex complements the CAHP and mirrors the Puerto Rico Hurricane Annex (Annex G). The CAHP, using the Community Lifelines framework, gives whole-community partners the information and resources they need to understand the Community Lifelines, to coordinate with partners using the Lifelines, to offer basic guidance on how to implement the Community Lifeline Construct during the response to an incident, and to serve as a guide for how to deliver the Core Capabilities through the 17 standard Lines of Effort, which will stabilize the Lifelines. Region 2 has developed additional Lines of Effort to further stabilize the Lifelines. This annex addresses a problem-set in a scenario agnostic fashion. Because this annex addresses a specific type of incident, operational information about the incident begins in Phase 1. Further details about Oversight and Coordinating Instructions can be found in the CAHP.

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Appendix I-1: Lifeline – Safety and Security

1 Introduction

The Safety and Security Community Lifeline includes the public-safety requirements for achieving effective first-response capabilities, such as search and rescue, police, and firefighting services. It also supports the effective communication of public protection orders, such as an evacuation order from officials with the statutory authority to reduce the exposure of survivors to the effects of a hurricane. Such support includes fuel, comfort stations, and shelter commodities. Territorial and district officials are responsible for evacuations and for issuing evacuation notifications. The Territory may have varying policies or protocols regarding recommendations for issuing evacuating orders, as well as coordination within their own government and FEMA for the affected population.

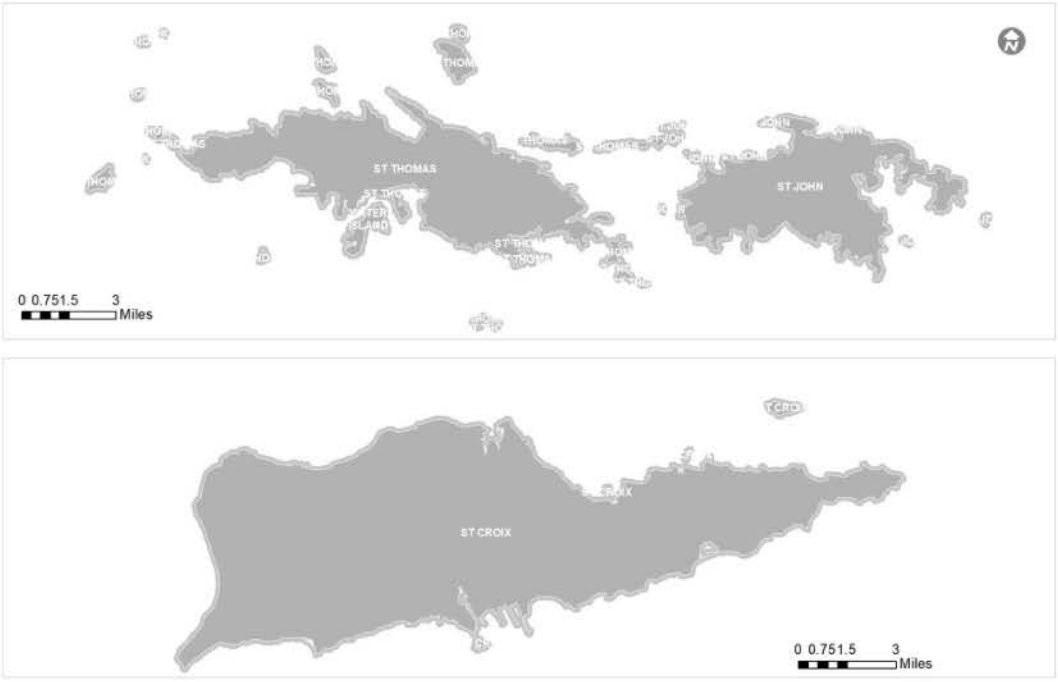

Figure 1: The Locations of Law Enforcement and Firefighting Services

2 Impacts

The initial impacts of a hurricane and its cascading effects on communications, financial services, food and water services, and rumored or actual unlawful activities (i.e., theft and looting), will cause panic and fear among the survivors. Law enforcement officers will need to mitigate panic and fear as much as possible and establish a robust law enforcement presence.

Table 1: Impacts on the Safety and Security Lifeline

Lifeline Components	Impact
Law Enforcement and Security	▪ Police Stations on St. Thomas and St. John are expected to have moderate damage. Additional damage is expected in prisons, which would require additional law-enforcement officers. Federal Law Enforcement Officers (FLEO) will be routed to the USVI, if the Territory requests additional support
Fire Services	▪ Damaged Fire Stations: Two of the main fire stations on St. Thomas will sustain minor to moderate damage. Fire stations on St. Croix will sustain minor wind damage
Search and Rescue	▪ Out of a population of 107,000 in the impacted area, 2,200 persons will have to be rescued
Government Services	▪ Minor damage is expected to the Emergency Operation Centers and Public-Safety Answering Points (PSAP)
Community Safety	▪ Out of a population of 107,000 in the impacted area, 15,500 displaced persons will have to be evacuated ▪ Quick Response Teams (QRT) and security personnel will have to be activated to protect the first responders

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-1.

Efforts are focused on ensuring a safe and secure environment for impacted communities and responders while protecting essential resources and infrastructure. Priorities of effort are to alert and mobilize the necessary security, law enforcement and contract personnel to support the Territory and the Federal Government response priorities and complete security assessments. This includes:

- Employing resources to support the first lifesaving efforts;
- Securing essential facilities and protecting responders and their equipment;
- Supporting the Territory's law-enforcement officers; and
- Deploying correction officers and supporting the evacuation of the affected correctional facilities, on request.

Table 2: Critical Tasks for Evacuation and Protection of Affected Populations

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local, territorial partners
Phase 1b	▪ Activate Federal law enforcement resources for deployment to and employment in the affected area(s) ▪ Alert and deploy ESF-13 Quick Response Team (QRT)
Phase 1c	▪ Plan for the use of safety and security personnel from all levels of government in support of safety and security efforts relative to the well-being of survivors and responders during an incident ▪ Coordinate with local Law Enforcement and Emergency Management officials to identify and prioritize access control procedures with response partners. Establish badging and credentialing requirements for incoming responders
Phase 2a	▪ Coordinate with the USVI to determine the extent of the self-evacuated population and the need to conduct further evacuations ▪ Assess the public safety infrastructure to include fire, law enforcement, and EMS stations and personnel ▪ Identify public safety shortfalls and mission assignment assistance from Federal law enforcement agencies, United States Coast Guard (USCG), and/or DOD through ESF 13 ▪ Surge existing contract support for security personnel through MA process ▪ Coordinate with Defense Coordinating Element (DCE) to facilitate requests/volunteered support for/from continental United States (CONUS) based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate) ▪ Coordinate with ESF 15 to develop and disseminate effective messaging ▪ Voluntary agency liaison will coordinate with the Territory to identify voluntary organization active in disasters (VOAD) or community groups which may be able to assist and supplement formal security personnel
Phase 2b	▪ Continue to source and deploy firefighting, EMS, and law-enforcement assets in support of the requests and based on the needs of the USVI
Phase 2c	▪ Begin to incorporate considerations for the Recovery in the operations of the Territory's EOC. ▪ Continue to source and deploy firefighting, EMS, and law-enforcement assets in support of the requests and based on the needs of the USVI

Table 3: Critical Tasks for Responder Safety

Phase	Critical Tasks
Phase 1a	▪ Coordinate concerns for the health and safety and the occupational safety of the responders. ▪ Synchronize planning, training, and exercising, after-action reviews, and corrective action plans with the Territory and its districts.
Phase 1b	▪ Activate federal law-enforcement resources to be deployed to and employed in the affected area. ▪ Alert and deploy ESF #13's Quick Response Team (QRT).
Phase 1c	▪ Plan for the use of safety and security personnel from all levels of government to support safety and security efforts for the well-being of survivors and responders during an incident. ▪ Coordinate with local law-enforcement and emergency-management officials as well as their response partners to identify and set the priorities for access-control, including badging and credentialing, for incoming responders.
Phase 2a	▪ Establish operational security and fire protection for all the traditional and atypical responders who are engaged in lifesaving and life-sustaining operations. ▪ Coordinate with the Government of the USVI a strategy for the deployment and the use of staffers and resources (i.e., their numbers, locations, and transport needs). ▪ Coordinate with Defense Coordinating Element (DCE) to facilitate requests/volunteered support for/from continental United States (CONUS) based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate).

Phase	Critical Tasks
	▪ Institute a phased deployment plan and source fire, EMS, and law enforcement assets based on the assessed needs. ▪ Assess the condition of the Emergency Operation Centers (EOC). ▪ Activate Continuity of Operations Plans (COOP), as necessary. ▪ Source and deploy supplemental staffers through ESF #5, as needed.
Phase 2b	▪ Source and deploy subject matter experts (SME) (e.g., representatives from the U.S. Geological Survey [USGS], the Puerto Rico Seismic Network) to staff and support the EOCs, as necessary. ▪ Continue to source and deploy these assets in support of the requests and based on the needs of the USVI
Phase 2c	▪ Begin to incorporate recovery considerations in the operations of the EOCs. ▪ Continue to source and deploy these assets in support of the requests and based on the needs of the USVI

Table 4: Critical Tasks for Law Enforcement and Security

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training, and exercising as well as after-action reviews and corrective action plans with local partners
Phase 1b and 1c	▪ Coordinate with stakeholders and maintain Situational Awareness of their available resources, including personnel to assist in public safety and security efforts ▪ Activate a headquarters-level ESF #13 coordinator for Federal law-enforcement operations
Phase 2a	▪ Assess law enforcement capabilities and provide situational awareness for determining operational objectives driven by the consequences of the hurricane ▪ Source and deploy ESF 13 to assess need and begin sourcing law enforcement personnel ▪ Surge existing contract support for security personnel through Mission Assignment (MA) process ▪ Establish security operations for all traditional and atypical response personnel engaged in lifesaving and life-sustaining operations ▪ Coordinate with the Government of US Virgin Islands for the deployment and utilization strategy of personnel and resources (numbers, locations, transport, etc.) ▪ Coordinate with Defense Coordinating Element (DCE) to facilitate requests/volunteered support for/from continental United States (CONUS) based National Guard units as needed (federalized under Title 10 or acting under Title 32 as appropriate) ▪ Institute phased deployment plan and source law enforcement assets based upon assessed needs
Phase 2b	▪ Identify public safety shortfalls and mission assignment assistance from Federal law enforcement agencies, United States Coast Guard (USCG), and/or Department of Defense (DOD) through ESF 13 ▪ Continue sourcing assets and deployment of law enforcement assets based phased deployment plan/needs
Phase 2c	▪ Continue sourcing assets and deployment of law enforcement assets in support of US Virgin Islands requested demand/needs ▪ Establish and implement ESF 13 working group plans for supporting displaced prison populations

Table 5: Critical Tasks for Firefighting Services

Phase	Critical Task(s)
Phase 1a	▪ Provide contact with appropriate fire service organizations/associations at the national level to ensure any actions by these organizations relative to disaster planning, preparedness or response are coordinated with the ESF #4 primary agency and other appropriate support agencies ▪ Additional planning, training, and exercises have been conducted in coordination with local, Federal entities
Phase 1b and 1c	▪ Alert and place on stand-by a Type 1 Incident Management Team (IMT)

Phase	Critical Task(s)
Phase 2a	▪ Assess and establish adequate supplemental firefighting assistance required ▪ Coordinate with ESF-4 to provide required support and assistance ▪ Mobilize additional firefighting and Emergency Medical Services (EMS) resources through the National Interagency Fire Center (NIFC) or the National Interagency Coordination Center (NICC), and the Geographic Area Coordination Center (GACC)
Phase 2b	▪ Continue sourcing and deploying firefighting assets in support of the requests and based on the needs of the USVI
Phase 2c	▪ Continue sourcing and deploying firefighting assets in support of the requests and based on the needs of the USVI

Table 6: Critical Tasks for Search and Rescue

Phase	Critical Task(s)
Phase 1a	▪ Evaluate the state of operational readiness of Territory SAR resources by assessing personnel training and inventorying deployable assets ▪ Ensure Territory Search and Rescue (SAR) resources are available for activation ▪ Ensure that an adequate number of technical specialists required for support are rostered, trained, and available for deployment
Phase 1b and 1c	▪ Pre-deploy the Territory's SAR resources ▪ Pre-deploy the Federal Government's SAR resources
Phase 2a	▪ Assess the need for SAR operations (e.g., urban search and rescue, high and low angle rope rescue, trench rescue, swift water rescue) ▪ Source and deploy the required personnel and their special equipment through ESF #9 ▪ Source, deploy, and support a Quick Response Team (QRT) for ESF #9's deployed personnel ▪ Coordinate with FEMA's International Affairs Division to source international support through the United States Agency for International Development (USAID), if necessary
Phase 2b	▪ Continue sourcing and deploying search and rescue assets in support of the requests and based on the needs of the USVI
Phase 2c	▪ Continue sourcing and deploying search and rescue assets in support of the requests and based on the needs of the USVI

Table 7: Critical Tasks for Government Services

Phase	Critical Task(s)
Phase 1a	▪ Perform site surveys and assessments to inform resource requests, conduct analysis, and determine the prioritization of infrastructure restoration ▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, Cybersecurity and Infrastructure Security Agency (CISA) coordinators, and LNOs
Phase 1b	▪ Coordinate with public and private sector infrastructure owners, operators, and partners to prioritize restoration activities, based on the degradation to essential infrastructure and the resources required to repair infrastructure
Phase 1c	▪ Coordinate with stakeholders and maintain situational awareness of their available resources to include personnel availability to assist in the public safety and security efforts ▪ Activate a headquarters-level ESF 14 and Cybersecurity and Infrastructure Security Agency (CISA) coordinators and LNOs
Phase 2a	▪ Assess the US Virgin Islands governments capability to fulfill essential tasks and activate continuity of operations plans (COOP) ▪ Recommend reassigning personnel assigned to non-essential government functions to support disaster functions (i.e. shelter/feeding operations, etc.) ▪ Coordinate with ESF 5 to provide supplemental support
Phase 2b	▪ Continue to source and deploy law-enforcement assets in support of the requests and based on the needs of the USVI

Phase	Critical Task(s)
Phase 2c	▪ Continue to source and deploy law-enforcement assets in support of the requests and based on the needs of the USVI

4 End State and Stabilization

The stabilization of the Safety and Security Community Lifeline in the wake of a hurricane depends on the stabilization or return to service of the other Lifelines. Evacuations, search and rescue operations, and firefighting operations depend on accessible roads, tunnels, and bridges; an adequate number of vehicles; and operable communications. Ensuring the safety of the responders and maintaining calm in the affected areas depends on clear and operable public communication systems. Threats to life-safety are no longer a concern responders and survivors. The essential functions of government, including executive leadership, are now operational. Enough search rescue assets are on-scene to assist all of the survivors. Enough firefighting resources are available to support the suppression of any fires.

Table 8: The Stabilization of the Safety and Security Lifeline Components

Lifeline Component	End State	Pre-Incident Planning
Evacuation and Population Protection	▪ Public warnings and protective actions, which have been issued under the statutory authorities of the Territory and its Districts, have been communicated the affected community ▪ Whole-of-government coordination of and support for safe evacuations, adequate medical care, and a shelter or lodging with reasonable accommodations have been provided until it is safe for the survivors to return to the affected area	▪ Appropriate measures were taken to support the required evacuations, including identifying and posting evacuation routes in the wake of a tsunami ▪ ESF #15 coordinated the drafting of public protection messages with the appropriate public-affairs officials of the Territory and its Districts
Responder Safety	▪ All responders in the incident's workforce operate safely, wear the appropriate personal protective equipment, and eliminate work related injuries, and fatalities.	▪ Field response personnel have access to the proper personal protective equipment.
Law Enforcement and Security	▪ Civil order has been maintained throughout the incident's life cycle. Law enforcement agencies in the affected area are fully capable of protecting the survivors	▪ ESF #13 engaged with the Territory's law-enforcement agencies to assess the need for support post-landfall ▪ Appropriate law enforcement assets were alerted, activated, and staged
Firefighting	▪ Firefighting services in the affected area have been restored to their full capacity and capability	▪ Firefighting capabilities from non-affected areas were assessed for potential support
Search and Rescue	▪ Survivors in the affected area have been located, rescued, and transported for medical care to a shelter	▪ ESF #9's assets were staged for rapid deployment in support of SAR operations in the affected area
Government Service	▪ Some schools have been reopened ▪ Students in unopened schools have been directed to an open school	▪ Continuity plans for educational institutions were developed ▪ Mitigation activities to retrofit these institutions were pursued

5 Authorities and Potential Waivers

5.1 Authorities

Task	Authorities
Evacuation and Population Protection	▪ Territorial and district officials are responsible for issuing evacuation notifications and for supporting the evacuations ▪ ESF #1 – Transportation, ESF #5 – Information and Planning, ESF #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services, ESF #7 – Logistics, and ESF #15 – External Affairs will support evacuations, if requested by the Territory
Responder Safety	▪ FEMA's Safety Officer for the incident is responsible for ensuring that its federal response partners, being aware of its hazards, have the appropriate personal protective equipment (PPE).
Law Enforcement and Security	▪ The Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) of the Department of Justice (DOJ) is ESF #13's Public Safety and Security Coordinator
Firefighting	▪ The U.S. Forest Service (USFS) is ESF #4's Firefighting Coordinator
Search and Rescue	▪ FEMA and the U.S. Coast Guard (USCG) are the ESF #9's Search and Rescue Coordinators for land, swift water, flooded water, and open water rescues

5.2 Potential Waivers

In the wake of a catastrophic incident, the Governor of the USVI has the authority to restore order and ensure public safety by taking the following actions:

6. Requesting federal-law enforcement officers under the Emergency Law Enforcement Assistance Act, which request will be coordinated by the Attorney General or his/her designee; and
7. Designating members of the National Guard based in the Continental United States to conduct law-enforcement activities under the control of the Territory to the extent permitted by law.

Federal Law Enforcement Officers (FLEO) must have express statutory authority, including arrest authority, to enforce the territorial and local laws. If such authority is absent and executive authority, such as an order from the governor, is being relied upon instead, then concurrence must be granted by DOJ. ESF 13 has various degrees of law enforcement authority during a disaster based on their Territory statutes.

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Appendix I-2: Lifeline – Food, Water, Shelter

1 Introduction

The Food, Water, Shelter Community Lifeline includes the infrastructures, resources, and personnel needed to coordinate and maintain the response to an incident that requires the provision of food, water, and shelter to the survivors. The Governments of the Territory and its Districts will identify, establish, and possibly operate shelters and Points of Distribution (POD) with the support of Region 2, the Department of Agriculture (USDA), and other federal, local, private-sector, and non-governmental organizations (NGO), as well as voluntary, faith-based, and community-based organizations. The PODs will provide food, water, and essential supplies to survivors remaining in or near their home. The Region 2 Caribbean All-Hazards Plan (CAHP) includes messages to inform the public about support for PODs and shelters.

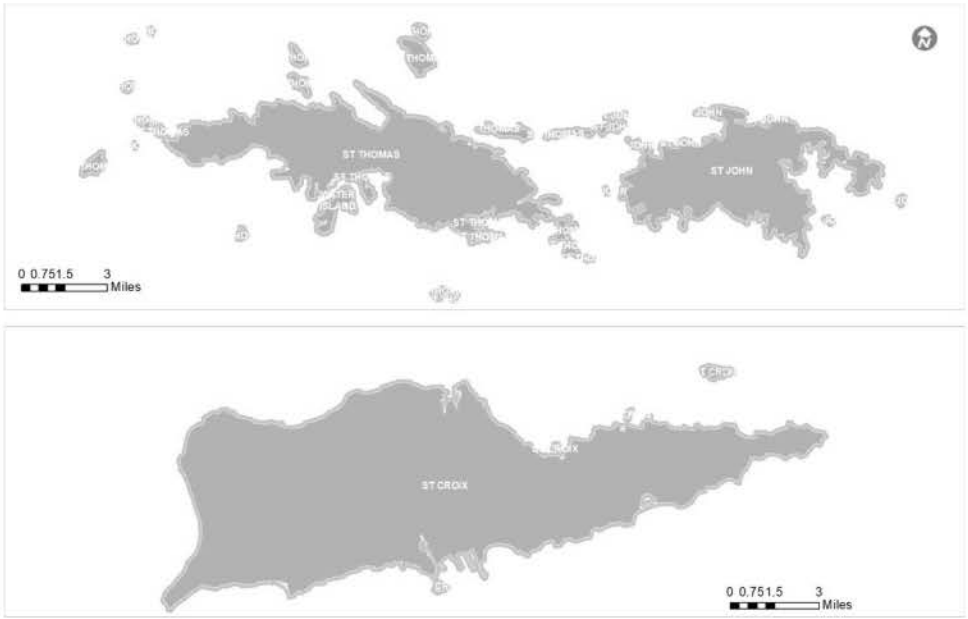

Figure 1: Points of Distribution, Water Filtration Plants, and Shelters

2 Impacts

A hurricane will make it difficult to estimate shortages of critical resources, including commodities, food, water trained personnel, sheltering, and warehousing support.

Sheltering may include organized shelters, ad hoc shelters established by community organizations, and spontaneous shelters established by the evacuees. Shelters have to be accessible to all the survivors, including persons with disabilities and access and functional needs. Historically, a higher percentage of people with disabilities and access and functional needs make up the shelter population than is represented in the general population. Supplies of

Durable Medical Equipment (DME) may need to be delivered to support shelter operations. The Region 2 Disability Integration Advisor will provide subject matter expert.

The guidance of a subject matter expert (SME) will ensure the coordination and the delivery of these resources. The Midnight National Shelter System will give the most accurate report of the number of persons in a shelter; however, the delivery of additional resources will be necessary to support the daytime population, which will be higher than the nighttime population.

Due to the impact of the incident, local first responders and volunteers may not be able to respond initially, and out-of-area assets will need to begin the immediate distribution of commodities to survivors. This may require federal assistance of commodity delivery, including the "last mile" of the delivery cycle, directly to the PODs/public. Commodity distribution to PODs need to account for day/night differences in counts as historically shelter numbers are expected to increase during the day.

Table 1: Impacts on Food, Water, Shelter Lifeline

Lifeline Component	Impact
Food	▪ Commodities will need to be sourced for an estimated 50% of the population (53,500 persons) in the affected area. 19% of the affected population (10,000 persons) will have access and functional needs
Water	▪ Bulk water will need to be distributed to 50% of population (53,500 persons) in the affected area. Outages at water utilities will be widespread across the USVI. An estimated 15% of customers (15,500 persons) will be without water services. Approximately 11% of the customers (11,500 persons) will be without wastewater services
Shelter	▪ The hurricane will cause 15% of the affected population (15,500 persons) to seek a shelter ▪ 1% of the affected population (200 persons) will have access and functional needs. 4% of the affected population (2,200 persons) will need temporary, non-congregate housing. Of the 2,200, 10% (220 persons) will have access and functional needs ▪ 3% of the affected population (3,200 persons) will be displaced and require long-term housing. Of the 3,200, 10% (320 persons) will have access and functional needs
Agriculture	▪ Agricultural production and processing will be impacted due to land subsidence and debris generation. Livestock disposal will be required, along with feeding options for the remaining animals. Crop damage is expected further impact the food supply chains

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-2.

Table 2: Critical Tasks for Food

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, Cybersecurity and Infrastructure Security Agency (CISA) coordinators, and LNOs

Phase	Critical Task(s)
Phase 1b and 1c	▪ Manage the supply-chain process, including the initial request for assets and commodities; orders to FEMA and its partners; transportation; inventory management at FEMA's locations; and the shipment to and receipt by the Incident Support Base (ISB) ▪ Provide supply-chain management, Situational Awareness, in-transit visibility, reports on performance management, and the mapping capabilities of the Geographic Information System
Phase 2a	▪ Provide logistics support for ESF #6's federal resources ▪ Source and deploy a mass care Mission Planning Team and a Temporary Housing Task Force, which will include representatives from: • Department of Housing and Urban Development (HUD); Federal Emergency Management Agency, including the Disability Integration Coordinator; Department of Health and Human Services (HHS); American Red Cross (ARC); Association of Realtors; General Services Administration (GSA); U.S. Army Corps of Engineers (USACE); Department of Agriculture (USDA); and Occupational Safety and Health Administration (OSHA) • Send the Team and Task Force to FEMA's Personnel Mobilization Center ▪ Source and deploy 6 personnel to assess the level of need for feeding the affected population, including: • 1 Disability Integration Specialist; 1 Household Service Animal Specialist from the USDA; 1 Individual Assistance and Technical Assistance Contract (IA-TAC) Specialist; and 3 Mass Care Specialists from FEMA ▪ Identify the immediate requirements for feeding and bulk distribution, including durable medical equipment (DME), for the impacted area(s), and coordinate with Logistics to support these requirements ▪ Coordinate with the Government of the USVI and its Districts, non-governmental organizations (NGO), and faith-based organizations to determine their capabilities and shortfalls ▪ Obtain (either through VOAD support or a contract) high-volume mobile kitchens that can serve 20,000 meals a day ▪ Source the initial response resources (IRR) BRAVO and ALPHA packages ▪ Source and deploy FEMA/Caribbean Area Office (CAO) stockpile replacements ▪ Issue a Notice of Funding Opportunity (NOFO) to fill the meal contract
Phase 2b	▪ Coordinate with each District to feed the affected population, including persons with access and functional needs, household pets, and service animals ▪ Refine requirements and provide resources for the support and sustainment of scattered survivors ▪ Establish a coordinated service-delivery plan and begin moving supplies and personnel into the affected area ▪ Work through ESF #6 and ESF #7 to coordinate the delivery of meals from the distribution centers to the PODs ▪ Identify, assess, and provide food to survivors in alternative shelters
Phase 2c	▪ Priorities of effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Territory and local partners to transition from emergency and short-term recovery to long-term recovery

Table 3: Critical Tasks for Water Utilities

Phase	Critical Task(s)
Phase 1a	▪ Synchronize planning, training and exercises, after-action reviews, and corrective action plans with local and territorial partners, Logistics Supply Chain Management System leads, Cybersecurity and Infrastructure Security Agency (CISA) coordinators, and LNOs
Phase 1b and 1c	▪ Manage the supply-chain process, including the initial request for assets and commodities; orders to FEMA and its partners; transportation; inventory management at FEMA's locations; and the shipment to and receipt by the Incident Support Base (ISB) ▪ Provide supply-chain management, Situational Awareness, in-transit visibility, reports on performance management, and the mapping capabilities of the Geographic Information System

Phase	Critical Task(s)
Phase 2a	▪ Coordinate with WAPA to determine the extent of the hurricane's impact ▪ Deploy an ESF #3 team to assess the impact on any water facility infrastructure ▪ Develop priorities and determine the resources required to effect repairs ▪ Coordinate efforts with public and private resources which have a high potential for creating cascading effects post-hurricane; Assess infrastructure plan/implement prevention or mitigation activities ▪ Begin making assessments
Phase 2b	▪ Source and deploy additional technical assistance personnel from the USACE and civil engineers from the DOD ▪ Calculate the personnel, materials, and equipment now on-island as well as the additional materials needed for restoration of infrastructure, including quantities and specifications ▪ Coordinate with the Territory to identify areas in need of water services ▪ Coordinate with National Guard to provide potable and non-potable water to sheltering survivors ▪ Provide temporary power to facilities offline due to energy issues ▪ Contract with the private sector to support repairs of water utilities infrastructure
Phase 2c	▪ Priorities of Effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Territory and local partners to transition from emergency and short-term recovery to long-term recovery ▪ Initiate plans to provide water support for transitional sheltering ▪ Develop and implement prioritized mitigation plan based on assessments

Table 4: Critical Tasks for Sheltering

Phase	Critical Tasks
Phase 1a	▪ Identify projected shelf stable meal, water, and animal food inventories available or being sent to Resource Staging Areas (RSAs) ▪ Provide subject matter expertise, guidance, and resources to all FEMA programs and services that are integrated and fully accessible to survivors with disabilities and other individuals with access or functional needs
Phase 1b	▪ Form a sheltering task force to identify shelter capacities, including non-traditional methods of post-landfall sheltering ▪ Issue invitational orders to the ARC and request support from ESF #8 and ESF #11 ▪ Validate healthcare facility shelter-in-place and evacuation requirements. Determine how survivors will access medical facilities and potential impacts to operational status
Phase 1c	▪ ESF 6 will provide subject matter expertise, guidance and resources to all FEMA programs and services that are integrated and fully accessible to survivors with disabilities and other individuals with access or functional needs ▪ Ensure proper positioning of shelter support resources
Phase 2a	▪ Provide logistic support for ESF 6 Federal resources ▪ Source and deploy mass care Mission Planning Team and Temporary Housing Task Force (comprised of representatives from HUD, FEMA, Department of Health and Human Services (HHS), American Red Cross (ARC), Association of Realtors, GSA, USACE, Department of Agriculture (USDA), Occupational Safety and Health Administration (OSHA), FEMA Disability Integration Coordinator, etc.); send to mobilization center ▪ Six (6) personnel to assess need of feeding, hydration, and sheltering of impacted populace; inclusive of one (1) disability/integration specialist, one (1) household/service animal specialist (USDA), one (1) IA-TAC contracting specialist, and three (3) FEMA mass care specialists ▪ Source HHS Assessment Team ▪ Identify immediate feeding, hydration, and bulk distribution (to include DME) requirements for the area(s) impacted by the hurricane, and coordinate with logistics to support requirements

Phase	Critical Tasks
	▪ Coordinate with Government of US Virgin Islands, local, NGOs, and faith-based organizations to determine local capabilities and shortfalls ▪ Source and deploy FEMA/Caribbean Area Office (CAO) stockpile replacements ▪ Work with the Territory to identify large venue sheltering sites
Phase 2b	▪ Coordinate with each District to feed, hydrate, and shelter impacted populations, including people with special and functional needs, household pets, and service animals ▪ Refine requirements and provide support and sustainment resources for scattered survivors ▪ Establish a coordinated service-delivery plan and begin moving supplies and staff into the area ▪ Establish safe and secure mass-care and shelter locations outside future high-hazard areas ▪ Work with hotels for transitional sheltering needs ▪ Identify, assess, and expand alternative sheltering options and fixed and mobile feeding sites ▪ Execute evacuation and reception plans for isolated populations and impacted communities ▪ Track movement of survivors and reunification efforts ▪ Initiate Disaster Housing and Disaster Loan Programs ▪ Expand sheltering outside the impacted areas to accommodate the expected steady increase of voluntary evacuees ▪ Initiate Individual Assistance Programs ▪ Track numbers of those in non-traditional shelters
Phase 2c	▪ Priorities of effort are to continue support and sustainment of all shelter, feeding, evacuation, relocation, and reunification activities ▪ Coordinate with the Territory and local partners to transition from emergency and short-term recovery to long-term recovery ▪ Initiate plans to implement transitional sheltering ▪ Consolidate or move emergency shelter and plan for ongoing wrap-around services and casework ▪ Work with animal coalitions to establish plans for consolidating household pet shelter inclusive of reuniting pets with owners, providing foster care, and adoption services

Table 5: Critical Tasks for Agriculture

Phase	Critical Task(s)
Phase 1a	▪ Facilitate the flow of information in the pre-incident phase of the Response, and coordinate intergovernmental planning, training, and exercising to prepare the assets that will support temporary repairs ▪ Develop plans that will incorporate the capabilities of the USVI's Districts in support of response activities
Phase 1b and 1c	▪ Participate in the USVI Department of Agriculture teleconferences to maintain Situational Awareness
Phase 2a	▪ Source and deploy support from the United States Department of Agriculture (USDA). ▪ Source and deploy the HHS's National Veterinary Response Teams ▪ In coordination with ESF #8, task components to ensure the health, safety, and security of livestock and food-producing animals, animal feed, and the safety of the manufacture and distribution of foods, drugs, and therapeutics given to animals used for human food production
Phase 2b	▪ Source and deploy the USDA's Animal Care Technical Specialists of the Animal and Plant Health Inspection Service (APHIS) to assist the U.S. Virgin Islands Department of Agriculture ▪ Determine options for the disposal of livestock and food-producing animals

4 End State and Stabilization

The stabilization of the Food, Water, Shelter Community Lifeline after a hurricane depends on the stabilization or the return to service of the other Lifelines as well as the reopening of grocery stores and the restoration of public utilities, which will allow most of the survivors to return to their home. A shortage of building inspectors will increase the need for temporary housing

because survivors will be wary of returning to a non-inspected residence. Shortages of critical resources, such as commodities, food, and water as well as trained personnel, could result in a competition for these resources among the Territory's Districts. Survivors who rely on the Supplemental Nutrition Assistance Program (SNAP) might experience a delay in getting and even the availability of their benefits because of hurricane damage. Therefore, they might need supplemental support.

Stabilization will be achieved as soon as all survivors, their pets, and their service animals have access to food, water, sanitary services, and sheltering that includes cellular reception, capacity, accessibility, and wrap-around services, is supporting the displaced population. Additionally, sufficient resources are in place to sustain agricultural requirements and the needs of the agricultural sector.

Table 6: The Stabilization of the Food, Water, Shelter Components

Lifeline Component	End State	Pre-Incident Planning
Food	▪ The distribution of food is no longer required. Grocery stores have been reopened. The feeding operations and food banks of voluntary organizations are operational.	▪ Establish a set of commodities in strategic locations prior to an incident with commodities that have a long-term (10+ years) shelf life.
Water	▪ The distribution of potable and non-potable bulk water is no longer required because water and wastewater utilities have been restored. ▪ All customers are now receiving the fully restored services of these utilities.	▪ Availability of enough potable water and vehicles capable of transporting bulk water staged at key locations with a contract in place for the immediate use of these resources, if required. ▪ Identify and establish redundant power at critical facilities.
Shelter	▪ All survivors in shelters transitioned to permanent housing, which can accommodate persons with disabilities or with access and functional needs. ▪ All eligible survivors have been given access to programs, such as STEP and VALOR, which will allow them to return to and remain in their home while permanent repairs are being completed.	▪ Identify and establish public and private partnerships that would help the survivors find temporarily housing, including hotels, motels, and home rental agencies. ▪ Adopt the newest building codes, train building inspectors, and enforce higher standards for residential, commercial and industrial structures.
Agriculture	▪ Sufficient resources are in place to sustain the agricultural sector, including the production and processing of crops and the management of livestock.	▪ Coordinate intergovernmental planning, training, and exercising to prepare the assets that will support the agricultural sector.

5 Authorities

- The Governments of the Territory and its Districts are responsible for providing mass care, including sheltering and POD operations. Sheltering could include organized shelters, ad hoc shelters established by community organizations, and spontaneous shelters established by evacuees.
- FEMA is the coordinator for Emergency Support Function #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services. In coordination with the Red Cross and the National Voluntary Organizations Active in Disaster (National VOAD), ESF #6 will

support shelter operations and the temporary housing program, as needed. The ESF #6 framework can be employed with or without a Stafford Act declaration.

- FEMA and the General Services Administration (GSA) are the coordinators for ESF #7 – Logistics. In coordination with ESF #6, ESF #7 will support POD operations.
- The Territory is responsible for public messaging, including shelters and POD locations. DHS is the coordinator for ESF #15 – External Affairs and will coordinate with the Territory for assistance with the development and dissemination of consistent, timely, and accurate messages.
- Additional federal support for the Food, Water, and Shelter Lifeline includes:
  - The U.S. Army Corps of Engineers (USACE), the coordinator for ESF #3 – Public Works and Engineering, will support several components of the Food, Water, and Shelter Lifeline.
  - The Department of Health and Human Services (HHS), the coordinator for ESF #8 – Public Health and Medical Services, will provide medical support for shelters in coordination with ESF #6. HHS will also coordinate emergency behavioral health services for shelter residents and first responders.
  - The United States Department of Agriculture (USDA), the coordinator for ESF #11 – Agriculture and Natural Resources, will provide support to shelters in coordination with ESF #6. This support will be primarily in the form of guidance by subject matter experts (SME) for the operations of pet shelters. ESF #11, if requested, will also support the augmentation of commodities for the PODs.

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Appendix I-3: Lifeline – Health and Medical

1 Introduction

The Health and Medical Community Lifeline provides emergency medical services and the available acute medical care needed to meet the immediate lifesaving and life-sustaining needs of the survivors. As the medical care facilities are restored to the normal capabilities, behavioral health capabilities will support longer-term survivor needs and the public health operations impact on the long-term health of the community.

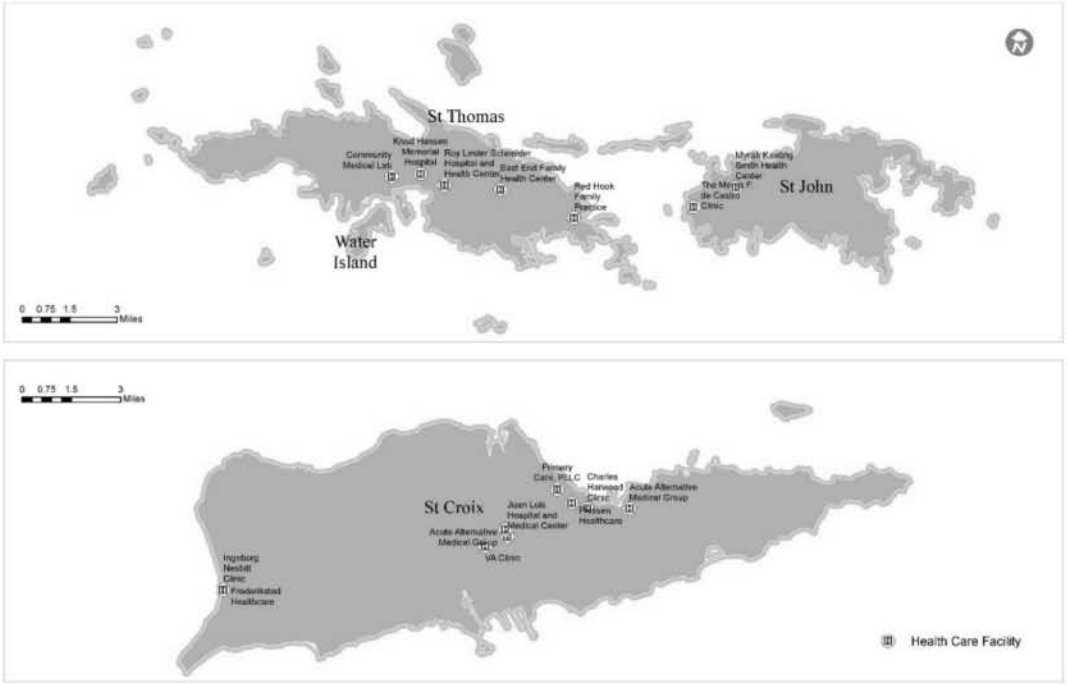

Figure 1: Overview of Healthcare Facilities

2 Impacts

A hurricane is likely to trigger an increase in diseases caused by a lack of sanitation, an increase in pressure on the healthcare system, and the loss of healthcare facilities that are inoperable due to structural damage.

Table 1: Impacts on Health and Medical Lifeline Components

Lifeline Component	Impact
Medical Care	Three healthcare facilities are expected to be damaged.
Patient Movement	Ambulatory medical services are likely to be affected by the loss of components of the transportation sector. Many elderly survivors and persons with chronic illnesses will be affected They will require additional assistance or could experience medical complications resulting from impacts to other Lifelines.
Public Health	Due to the potential for damage and loss of power, an increase in diseases is likely from a lack of sanitation creating increased pressure on the healthcare system. 300–500 persons might require hospitalization. The incident will cause mental stress and a need for crisis counseling, which needs to be carried out in a culturally sensitive manner to avoid social stigma.
Fatality Management	30–50 fatalities are expected.
Medical Supply Chain	The destabilization of facilities and the ports of departure will have cascading impacts to other medical facilities.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-3.

The primary focus is to provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support.

Initial targets include delivering medical countermeasures to exposed populations, completing triage and initial stabilization of casualties, followed by the definitive care of those likely to survive their injuries. Concurrently, supplemental fatality management services are a priority of effort, including body recovery, victim identification, and temporary mortuary solutions; in addition to supporting survivors with deceased relatives, and developing plans for disposition of unclaimed bodies and long-term storage.

Secondary targets include the completion of health assessments, identifying a recovery processes, and the return of medical surge resources to pre-incident levels.

The first Priorities of Efforts are to:

- Activate, deploy, and stage ESF #8 medical teams and assets at identified Incident Support Bases (ISB);
- Activate, deploy, and employ targeted medical resources to support immediate lifesaving operations;
- Initiate and expand the assessments of hospitals and medical-care facilities to establish situational awareness and determine the shortfalls in each district;
- Expand operations to territorial identified care-delivery sites;
- Activate and deploy Federal, territorial, and private-sector patient movement resources;

- Evacuate patients from non-operational healthcare facilities; Establish reception areas for medical evacuees, and establish casualty-transportation priorities;
- Support Territory and District resources caring for patients with chronic health needs; and
- Implement all surviving public-health response activities

If the Disaster Medical Assistance Team (DMAT), Federal Medical Stations (FMS), and/or the Disaster Mortuary Operational Response Team (DMORT) are requested, "wrap-around" services will need to be supplied by the USVI or coordinated through the Regional Response Coordination Staff (RRCS). This includes food, water, shelter, sanitation (including showers), laundry, and waste-removal services for all members of the medical staff. Emergency behavioral health support may be requested to supplement territorial services for shelter residents and first responders.

Table 2: Critical Tasks for Medical Care

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memoranda of understanding (MOU), and interagency agreements (IAA) with Federal departments and agencies to provide supplemental personnel and resources ▪ Enhance the preparedness and resiliency of health and medical systems, as well as communities through preparedness grants, mitigation efforts, readiness guidance, and support in planning, training, and exercises
Phase 1b and 1c	▪ Determine capabilities of medical facilities to share and transport resources (personnel, equipment, medication) ▪ Request GSA to perform emergency leasing services to locate Joint Field Offices, warehouses, and other facilities to support logistical and sheltering requirements
Phase 2a	▪ Assess medical facilities including, hospitals, dialysis centers, long-term care facilities, and non-traditional medical facilities and determine the operational capability of each ▪ Building engineers and medical professional may be needed for assessments ▪ Coordinate with ESF 8Assess medical facilities, including, hospitals, dialysis centers, long-term care facilities, and non-traditional medical facilities to determine their operational capabilities. Building engineers and medical professionals might be needed to make these assessments, which should be coordinated with ESF #8.
Phase 2b	▪ Stabilize damaged facilities and begin to repatriate facilities where possible ▪ Deploy ESF 8 teams to set-up temporary facilities near damaged hospitals and clinics (parking lots, nearby stadiums, etc.) ▪ Continue sourcing and deploying medical assets in support of the requests and based on the needs of the USVI
Phase 2c	▪ Continue sourcing and deploying medical assets in support of the requests and based on the needs of the USVI

Table 3: Critical Tasks for Patient Movement

Phase	Critical Task(s)
Phase 1a	▪ Develop and review PSMAs, memoranda of understanding, and IAAs with Federal departments and agencies to provide supplemental personnel and resources ▪ Coordinate with CONUS medical care facilities to receive high-risk patients
Phase 1b and 1c	▪ Mission assign activation of National Disaster Medical System (NDMS) Patient Movement/Evacuation System – En-route Patient Staging System. ▪ Coordinate with ESF-8 to deploy the DMAT and Medical Strike Teams ▪ Alert Resource Support Section of potential activation of Federal Medical Station sites

Phase	Critical Task(s)
Phase 2a	▪ Initiate the activities authorized by the Declaration of a Public Health Emergency by the Secretary of Health and Human Services, which will provide targeted public-health and medical support and products to all persons in need in the affected area. Issue waivers, if requested and appropriate. ▪ Source and deploy a complete Incident Response Coordination Team (IRCT) and source an HHS Logistics Response Assistance Team (LRAT). ▪ Source and deploy two DMATs (2x48 pax) to the CONUS Mobilization Center. ▪ Health and Medical Task Force (HMTF) two teams (1x7 pax) One team on St. Croix and one team on St. Thomas. ▪ Determine the appropriate placement of medical support resources (FMS).
Phase 2b	▪ Deploy the HHS LRAT and the IRCT, and assessment teams. ▪ Begin assessments cross walking/utilizing other core capabilities (e.g., mass care, public health and medical needs, assessment of the health care system/facility infrastructure, the status of dialysis treatment facilities, and the need for ESRD patient evacuation) ▪ Establish triage areas on the fringe of non-affected areas. ▪ Begin the Patient Movement Planning Process in coordinating with the DOD Joint Regional Planning Officer and Veteran Affairs. ▪ Coordinate with ESF #15 – External Affairs, FEMA's International Affairs Division and VIDOH for additional support. Request USAID, Doctors without Borders, and the Medical Reserve Corps (MRC) of the USVI, as needed and if available. ▪ Roster additional DMATs to backfill deployed teams, as necessary.
Phase 2c	▪ Continue sourcing and deploying EMS assets in support of the requests and based on the needs of the USVI

Table 4: Critical Tasks for Public Health

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Coordinate with the components of ESF #6 – Mass Care, Emergency Assistance, Temporary Housing, and Human Services to ensure the full, efficient, and timely delivery of mass-care services is provided.
Phase 1b and 1c	▪ Activate the Secretary of Health and Human Services' Emergency Management Group and the HHS/Office of the Assistant Secretary for Preparedness and Response's IRCT. ▪ Initiate the deployment of the IRCT and the medical response teams with supply caches.
Phase 2a	▪ Assess damage to public health infrastructure and personnel capacity ▪ Consider waivers which may be needed for public health facilities, or policy changes which may be needed to aide in incident stabilization (i.e. prescription drug waivers, etc.) ▪ Coordinate with ESF #8 to assess the need, source, and deploy any needed assets ▪ Assess the behavioral health need and impacts to the affected population. ▪ Coordinate with ESF #8 to begin sourcing behavioral health assets and expertise ▪ Consider partnering with VOADs to supplement personnel.
Phase 2b	▪ Continue sourcing and deploying public health and behavioral health assets in support of the requests and based on the needs of the USVI. ▪ ESF #8 coordinates with EPA to ensure containment of potential hazards causing spread of disease.
Phase 2c	▪ Continue sourcing and deploying public health and behavioral health assets in support of the requests and based on the needs of the USVI

Table 5: Critical Tasks for Fatality Management

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies to provide supplemental personnel and resources. ▪ Enhance the preparedness and resiliency of the mortuaries systems with as well as communities through preparedness grants, mitigation efforts, readiness guidance, and support for planning, training, and exercising.
Phase 1b and 1c	▪ Coordinate with ESF #8 to deploy the Disaster Mortuary Operational Response Teams. ▪ Determine the capabilities of morgues and cold-storage facilities to transport and store resources until collection.
Phase 2a	▪ Assess the mortuary needs and the impact of the casualties on the affected population. ▪ Mortuary Affairs (16 pax) Location dependent on requirement.
Phase 2b	▪ Continue sourcing and deploying fatality-management assets in support of the requests and based on the needs of the USVI.
Phase 2c	▪ Continue sourcing and deploying fatality-management assets in support of the requests and based on the needs of the USVI.

Table 6: Critical Tasks for the Medical Supply Chain

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with federal departments and agencies for the manufacturing, testing, storage, and distribution of the products. ▪ Sector-Specific Agencies (SSA) and CISA reach out to the stakeholders of critical infrastructures during incident-management operations to collect and share information, as part of National Level Reporting (NLR) requirements.
Phase 1b and 1c	▪ This includes the ability of the existing supply chain resources to meet the manufacturing, testing, storage, and distribution of these products
Phase 2a	▪ Assess the impacts of the hurricane on the medical supply chain, including its impact on supplies reaching the USVI and its cascading impacts on the CONUS. ▪ Consider opening the Strategic National Stockpile to supplement needed medical supplies. ▪ Coordinate with ESF #8 to source and deploy these resources.
Phase 2b	▪ Assess the burn rate for medical supplies and begin planning for long-term impact. ▪ Begin sourcing alternative methods for getting these supplies, if needed.
Phase 2c	▪ Continue sourcing and deploying the assets of the medical supply chain in support of the requests and based on the needs of the USVI.

4 End State and Stabilization

Stabilization of the Health and Medical Community Lifeline in the wake of a hurricane depends on the stabilization or return to service of the other Lifelines. Hospitals depend on power, potable water, an operable wastewater system, and adequate communications to support the needs of the affected population. Hospitals require special chemicals and the removal of hazardous materials and biological waste to maintain their core operations. Pre-planning should include this process.

The Health and Medical Lifeline will be stabilized as soon as all survivors, their pets, and their service animals have access to the required medical and veterinary care, emergency medical systems are capable of managing the movement of patients, enough temporary support for fatality management is in place to meet the demand, and the medical supply chain is capable of resupplying medical care providers.

Table 7: The Stabilization of the Components of the Health and Medical Lifeline

Lifeline Component	End State	Pre-Incident Planning
Medical Care	▪ The normal operations of medical facilities have been fully restored.	▪ Coordinate with medical facilities to identify essential medical supply chains, necessary stockpiles, and emergency generation capabilities.
Patient Movement	▪ Emergency medical services have been fully restored in the impacted community.	▪ Enough emergency medical service resources staged for rapid response based on population requirements. ▪ Ambulance contract in place for deployment, if requested by territory or local partner
Public Health	▪ Epidemiological and public-health capabilities, such as surveillance, outreach, vector control, and immunization, have been fully restored. ▪ Crisis care as well as psychological and behavioral healthcare services have been fully restored.	▪ Ensure adequate stockpiles have been staged at a key location for immediate deployment to field operations. ▪ Train and coordinate with VIDOH for disaster crisis counseling. ▪ Plan for cultural sensitivity regarding counselor selection and placement
Fatality Management	▪ Funeral homes, morgues, and mortuary facilities are fully restored to normal capabilities. ▪ A plan exists for unclaimed decedents in long-term cold storage facilities.	▪ Coordinate with mortuary processing and storage facilities to identify necessary medical stockpiles and emergency generation capabilities.
Medical Supply Chain	▪ The operations of the medical supply chain for manufacturing, transporting, and exporting supplies is fully restored.	▪ Coordinate with the Private Sector Liaison to ensure that the medical supply chain has redundancies and measures for structural mitigation in place.

5 Authorities and Potential Waivers

5.1 Authorities

The Department of Health and Human Services (HHS) is the coordinator for ESF #8 – Public Health and Medical Services. HHS is the Lead Federal Agency (LFA) and Sector-Specific Agency (SSA) for incidents involving public health. As the SSA, HHS is responsible for assembling leaders in business and government to prepare for and protect against all the hazards facing the Healthcare and Public Health (HPH) Sector.

Under the National Infrastructure Protection Plan (NIPP) of 2013, governmental and private-sector entities share the responsibility for securing and enhancing the resilience of the critical infrastructures of the HPH Sector. This public and private partnership identifies and prioritizes the most critical elements of the Nation's HPH infrastructure, shares information on risks impacting that infrastructure, and implements activities to protect and enhance the resilience of the sector.

5.2 Potential Waivers

The thirteen (13) articles of the Emergency Management Assistance Compact (EMAC) set the foundation for sharing resources from state to state that have been adopted by all 50 states, the District of Columbia, Puerto Rico, USVI, and has been ratified by Congress (PL-104-321). Medical professionals deployed through the (EMAC) are subject to Article V, stating whenever any person holds a license, certificate, or other permit issued by any state party to the compact evidencing the meeting of qualifications for professional, mechanical, or other skills, and when such assistance is requested by the receiving party state, such person shall be deemed licensed, certified, or permitted by the state requesting assistance to render aid involving such skill to meet a declared emergency or disaster, subject to such limitations and conditions as the governor of the requesting state may prescribe by executive order or otherwise. Medical professionals deployed through ESF 8 do not require additional licensing to work within their medical certifications in the Territory.

Hyperlink: Emergency Management Assistance Compact

When the President declares a disaster or emergency under the Stafford Act or the National Emergencies Act (NEA) and the Secretary of the HHS declares a public-health emergency under Section 319 of the Public Health Service Act, the Secretary is authorized under section 1135 of the Social Security Act to waive or modify particular requirements of Medicare, Medicaid, and the Children's Health Insurance Program (CHIP) to ensure that (1) enough health care supplies and services are available to meet the needs of persons enrolled in these programs in the affected area during specified time periods and (2) the providers of such services acting in good faith can be reimbursed and exempted from sanctions absent any determination of fraud or abuse.

Hyperlink: Health and Human Services, Centers for Medicare & Medicaid Services

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Appendix I-4: Lifeline – Energy (Power and Fuel)

1 Introduction

The Energy Community Lifeline is fundamental to maintaining essential services. A hurricane often interrupts the processes for generating, transmitting, and distributing electric power and damages its infrastructures, which often results in hardships and life-threatening situations for the affected population. The cascading impacts of power outages affect the other Lifelines, causing further deterioration in the survivors' standard of living and complicating response efforts.

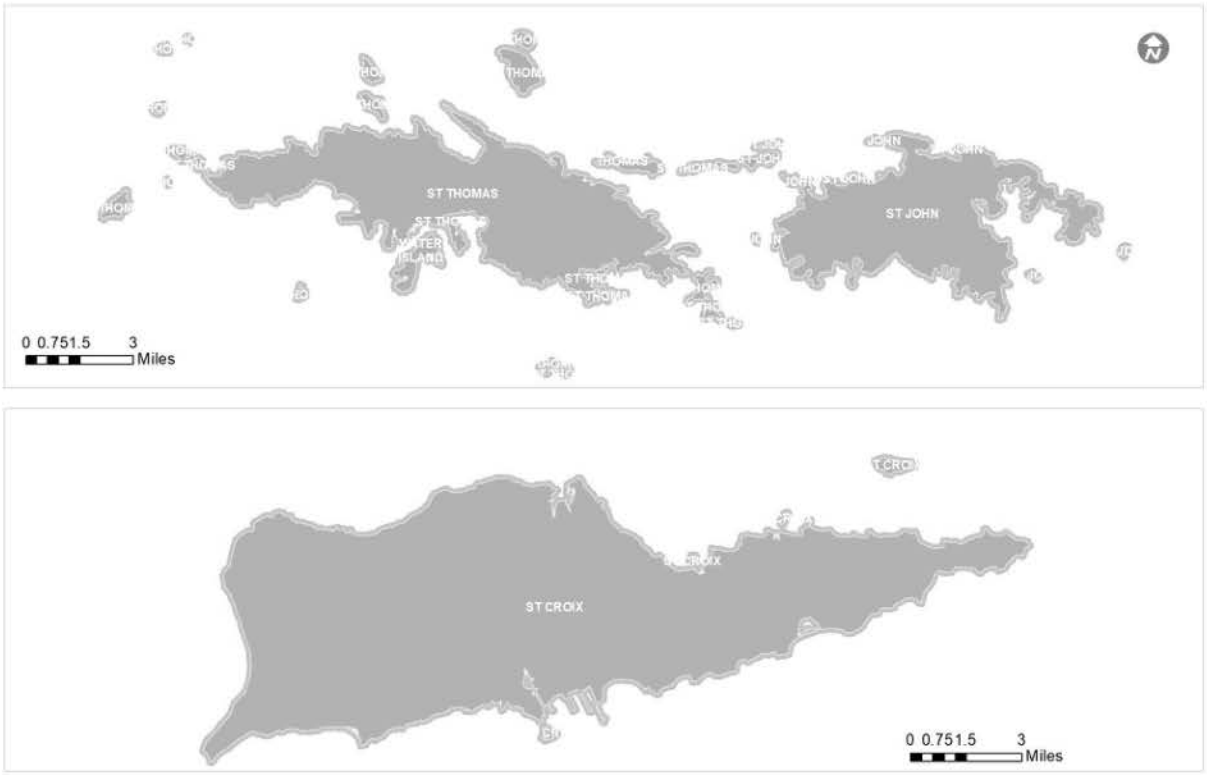

Figure 1: Power Generation Components

2 Impacts

Successful restoration efforts depend on the coordinated response of the utilities, ESF #12, FEMA, emergency management and public safety agencies, electrical industry partners, and other key stakeholders. Primary issues include:

- Cascading impacts of power disruptions; support for the generation, transmission, and distribution of electric power; and support for system restoration activities among all affected partners.
- Examining impacts to energy infrastructure systems and any cascading impacts to other sectors to prioritize energy restoration activities/integration of backup power generation and fuel requirements.
- Ensuring utility crews can travel to the affected areas (having roads cleared of debris) as well as lodging and operational support considerations.
- Maintaining situational awareness in an extended power outage environment.
- Facilitating coordination and logistical support among territorial and private sector stakeholders with processes established to request utility support, debris removal, sheltering, volunteer management, traffic control, and public safety assistance.
- Using information about the electric power sector (e.g., the capacity and operational status of electric power systems, pipelines, fuel refineries, levees, dams, and key public infra-structures) to develop a Common Operating Picture (COP) and a system for sharing this information with decision makers.

Table 1: Impacts on the Components of the Energy Lifeline

Lifeline Component	Impacts
Power	▪ There are two main electrical power facilities, one on St. Croix and one on St. Thomas, both of which are more than 25 years old. ▪ The facility on St. Thomas will experience at least moderate damage and a delayed recovery. ▪ The facility on St. Croix will experience minor damage and a partial recovery in 3–7 days. ▪ There are 22 of transmission lines, 9 on St. Croix and 13 on St. Thomas and St. John, a majority of which will suffer minor damage from ground disturbance and storm surge. Initial blackouts across the Territory will cause significant grid damage to transmission and distribution systems. Approximately 55,500 persons will be without power.
Fuel	▪ Two oil containment facilities will experience at least moderate damage and a full recovery in 7 days. ▪ Fuel will be needed for as many as 350 generators. ▪ The potential burn rate is expected to be more than 35,000 gallons of fuel per day for as many as 60 days.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-4.

Table 2: Critical Tasks for the Power Components

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with Federal departments and agencies for the manufacture, testing, storage, and distribution of these components. ▪ Sector-Specific Agencies (SSA) and CISA conduct outreach to critical infrastructure stakeholders during incident management operations to collect and share information as part of National Level Reporting (NLR) requirements
Phase 1b and 1c	▪ Analyze and model the potential impacts on the electric power, oil, natural gas, and coal infrastructures, and determine the effect that a disruption in their services will have on other critical infrastructures. ▪ Deploy USACE management cell & planning response team (PRT) ▪ Coordinate with ESF-12 to advise when the decision point has been reached to shut down power infrastructure in an impacted area
Phase 2a	▪ FEMA activates generator staging bases to provide the space to receive, maintain, and prepare generators for installation ▪ Establish and sustain Interagency Essential Infrastructure Assessment Task Force to include a representative from Department of Energy ▪ Assess the impact of the hurricane on CIKR assets, set priorities for repairing them, and determine the resources needed to affect these repairs ▪ Source DOD Civil Engineer assets to assist with stabilization and repair efforts. Process requests for information and/or assistance from critical infrastructure owners and operators ▪ Source and deploy, through ESF #3, the 249th Engineer Battalion (Prime Power) with an USACE Action Officer (AO) ▪ Activate the USACE's Advanced Contract Initiative (ACI) to support debris removal, the restoration of potable water, temporary roofing, and emergency power ▪ Coordinate efforts in conjunction with the public-sector and private sector-assets that have a high potential for mitigating the cascading effects of the hurricane; assess the infrastructure plan and implement prevention or mitigation activities. ▪ Begin making assessments.
Phase 2b	▪ FEMA activates generator staging bases to provide the space to receive, maintain, and prepare generators for installation. Required generators not in stock are delivered to generator staging bases ▪ Source and deploy additional USACE technical assistance personnel and DOD Civil Engineering assets ▪ Identify the personnel, materials, and equipment currently on-island, and any additional items needed for restoration (include quantities and specifications) ▪ Identify the purchasing entity for these resources, which will be used for the restoration of the power grid and the provision of temporary power (i.e., a basic order of materials [BOM] and generators provided by VITEMA or FEMA), and the logistical support needed to manage these resources. ▪ Work with DOT and USCG to identify a single point (i.e., a port) for delivery of materials and equipment for the restoration of the electric grid ▪ Begin planning the logistics (transportation, lodging, staging for equipment and supplies) needs to support off-island power grid restoration crews and equipment (e.g., industry mutual aid, and other (Federal) crews) ▪ Contract with private-sector providers for the repair of the generation and transmission issues
Phase 2c	▪ Develop and implement a mitigation plan based on the priorities of the assessments.

Table 3: Critical Tasks for the Fuel Components

Phase	Critical Task(s)
Phase 1a	▪ Develop and review pre-scripted mission assignments (PSMA), memorandums of understanding (MOU), and interagency agreements (IAA) with Federal departments and agencies for the manufacture, testing, storage, and distribution of these components. ▪ Sector-Specific Agencies (SSA) and CISA conduct outreach to critical infrastructure stakeholders during incident management operations to collect and share information as part of National Level Reporting (NLR) requirements
Phase 1b and 1c	▪ Coordinate with VITEMA to communicate refueling locations for emergency responders. ▪ Alert the Fuel Contract provider of the potential activation of the fuel contract ▪ Mission Assign the Defense Logistics Agency to provide and distribute fuel.
Phase 2a	▪ Establish and sustain the Interagency Essential Infrastructure Assessment Task Force to include a representative from Department of Energy ▪ Source and deploy, through ESF #3, the 249th Engineer Battalion (Prime Power) with an USACE Action Officer (AO) ▪ Activate the USACE's Advanced Contract Initiative (ACI) to support emergency power. ▪ Deploy a USACE Management Cell and Planning Response Team (PRT) ▪ Source and deploy through ESF #3 the Deployable Tactical Operations System (DTOS) to support USACE operations. ▪ Coordinate efforts in conjunction with the public-sector and private sector-assets that have a high potential for mitigating the cascading effects of the hurricane; assess the infrastructure plan and implement prevention or mitigation activities.
Phase 2b	▪ Source and deploy additional USACE technical assistance personnel and DOD Civil Engineering assets ▪ Identify the personnel, materials, and equipment currently on-island, and any additional items needed for restoration (include quantities and specifications) ▪ Identify the purchasing entity for these resources, which will be used for the restoration of the power grid and the provision of temporary power (i.e., a basic order of materials [BOM] and generators provided by VITEMA or FEMA), and the logistical support needed to manage these resources. ▪ Begin planning the logistics (transportation, lodging, staging for equipment and supplies) needs to support off-island fuel grid restoration crews and equipment (e.g., industry mutual aid, and other (Federal) crews) ▪ Work with DOT and USCG to identify a single point (i.e., a port) for delivery of materials and equipment for the restoration of fuel distribution ▪ Work with VITEMA and DOT to provide technical assistance on assessing the damage to and repairing the fuel lines. ▪ Contract for the distribution of fuel with a territorial provider, if possible. ▪ Provide temporary power for fueling stations. ▪ Use undamaged fuel terminals to supply fuel for emergency operations and implement measures for handling fuel shortages.
Phase 2c	▪ Develop and implement a mitigation plan based on the priorities of the assessments.

4 End State and Stabilization

Stabilization of the Energy Lifeline in the wake of a hurricane depends on the stabilization or return to service of fuel distribution and the power grid. This is achieved when generators are providing temporary emergency power for all critical facilities necessary to stabilize the other Lifelines and persons who depend on electric power for life-sustaining medical devices, and that fuel is available for first responders and for survivors as needed.

Table 4: The Stabilization of the Energy (Power and Fuel) Lifeline

Lifeline Component	End State	Pre-Incident Planning
Power	▪ The spot generation of electric power at pre-identified government facilities and state-designated sites is no longer required. ▪ Resources for temporary power have been reallocated or demobilized as the services of electric utilities have been restored to all customers.	▪ ESF #3 is alerted and activated to provide emergency power in coordination with ESF #7 and its territorial partners. ▪ ESF #12 is alerted and activated to support assessments of the power generation, transmission, and distribution infrastructures post-landfall.
Fuel	▪ The commercial fuel distribution system has been fully re-established; all types of fuel are now available.	▪ A fuel contract is in place for refueling emergency power generators and responder vehicles.

5 Authorities and Potential Waivers

5.1 Authorities

The U.S. Department of Energy (DOE) is the lead coordinator for ESF #12 – Energy. DOE serves as the Lead Federal Agency (LFA) and the Sector-Specific Agency (SSA) for power-related incidents. In the wake of a hurricane, support for generators could be critical for response and sheltering operations, which will be supported by ESF #7 – Logistics, led by Region 2 Logistics, and supported by ESF #3 – Public Works and Engineering, led by USACE.

Table 5: Authorities and Regulations for the Energy Lifeline

Title	Description
Critical Infrastructure Act of 2002 (P.L 107-296)	Establishes the Protected Critical Infrastructure Information (PCII) Program. It creates a framework that enables members of the private sector to voluntarily submit sensitive information regarding the Nation's critical infrastructure (CI) to the US Department of Homeland Security (DHS) with assurance that the government will not expose sensitive or proprietary data. It also establishes support within DHS Cybersecurity and Infrastructure Security Agency (CISA)
Defense Production Act of 1950 (DPA) (50 USC)	Authority to require acceptance and priority performance of contracts and orders to promote national defense, which includes emergency preparedness activities pursuant to Title VI of the Stafford Act and CI protection and restoration and to maximize domestic energy supplies. The Federal Priorities and Allocations System administers the placement of DPA priority ratings in contracts involving industrial, agricultural, health, energy, and transportation resources and services. The President delegated authority to require acceptance and priority performance of contracts or orders for these categories of resources and services to the US Department of Commerce (DOC), US Department of Agriculture (USDA), US Department of Health and Human Services (HHS), DOE, and US Department of Transportation (DOT), respectively. Though the placement of priority ratings in contracts and orders. This authority can ensure the timely delivery of materials and services from private business to restore power disruptions. Priority ratings can be placed on either government (local, state, federal) or private sector contracts. Additionally, the installation of government-owned equipment authority may expedite and prioritize the restoration of both public and private power infrastructure disrupted by either natural or human-caused hazards. Voluntary agreements under DPA may facilitate cooperation among business competitors to protect or restore power systems in connection with natural disasters or acts of terrorism. Participants in a voluntary agreement are granted relief from antitrust laws.

Title	Description
Emergency Reconstruction of Interstate Gas Facilities Under the Natural Gas Act 0f 2003 (18 CFR Parts 153, 157, and 375)	The Federal Energy Regulatory Commission (FERC) regulations enable interstate natural gas pipeline companies, under emergency conditions, to replace mainline facilities using-if necessary- a route other than the existing right-of way and to waive the 45-day prior notice requirement and cost constraints.
Power Plant and Industrial Fuel Use Act of 1978 (FUA) (42 USC)	Under section 404(a), this act gives the President authority to allocate coal (and require the transportation of coal) for use by any power plant or major fuel-burning installation during a declared severe energy supply interruption as defined by section 3(8) of the Energy Policy and Conservation Act (EPCA), 42 USC. § 6202(8).

5.2 Potential Waivers

- The U.S. Department of Transportation (DOT) has the authority to issue waivers that will be in effect in the wake of a disaster regarding:
  - Hours of Service for transporting hazardous materials; and
  - Certain operator enforcement qualifications arising from the use of personnel for pipeline activities related to response and recovery
- The U.S. Environmental Protection Agency (EPA) has the authority to issue waivers that will be in effect in the wake of a disaster such as:
  - A No Action Assurance that allows fuel loading and unloading without the use of vapor recovery or vapor combustion devices at bulk marine loading terminals and associated truck racks; and
  - A temporary waiver of penalties for excess emissions

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Appendix I-5: Lifeline – Communications

1 Introduction

The Communications Lifeline is fundamental for the maintenance of operational coordination, operational communications, Situational Awareness, a Common Operating Picture, and public messaging. The ability to communicate accurate information in a timely manner, which is a critical factor in a successful Response, could be impeded or degraded in the wake of a hurricane.

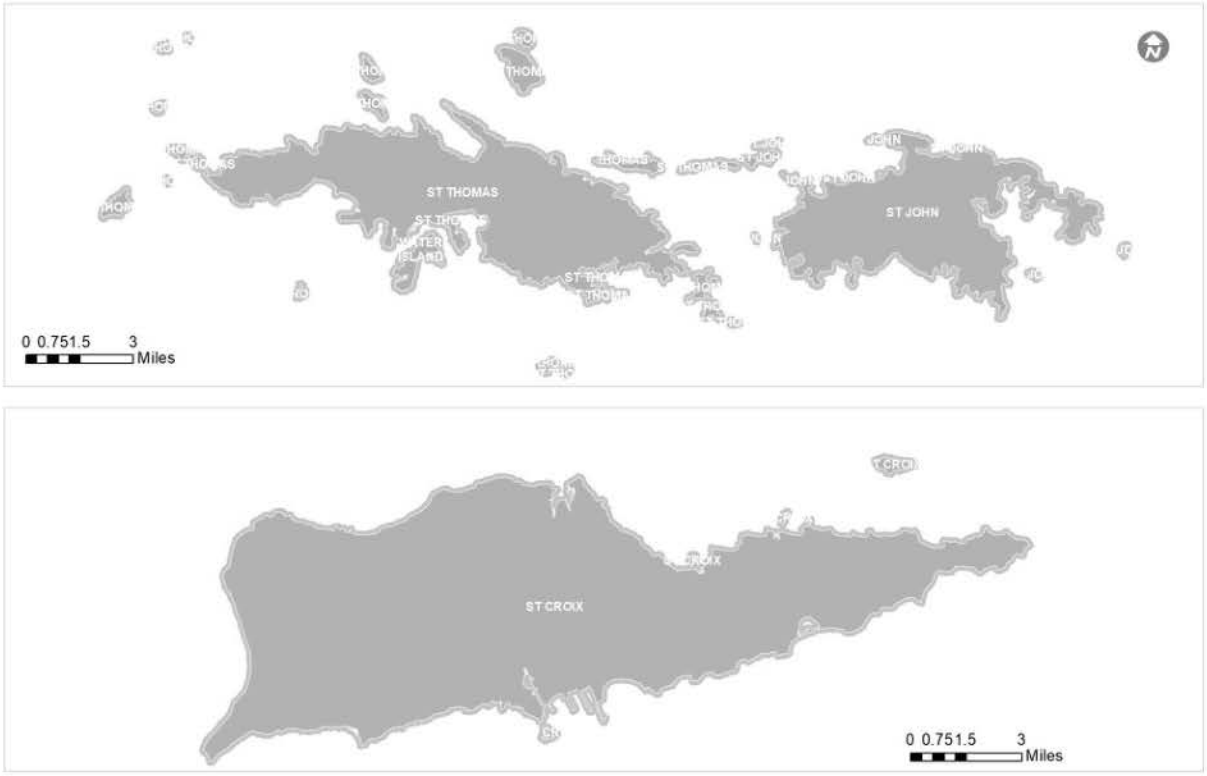

Figure 1: Communications Nodes

2 Impacts

A hurricane might result in the degradation or the total failure of the communications infrastructure, which will impede the capabilities of federal and territorial as well as private-sector and non-profit organizations to respond. Limited communication capabilities for search and rescue, situational assessment, and operational coordination will delay the response. Therefore, large-scale assets from outside the affected area will be required. Even though

personnel at the Watch Center will be available 24/7 to keep FEMA personnel well informed, the communications infrastructure might not be accessible in the Territory.

Physical damage to the electric power infrastructure (e.g., from downed power lines, flooding) could also compromise the telecommunications infrastructure, which would require the employment of additional federal communications support.

Table 1: Impacts on the Communications Lifeline

Lifeline Component	Impact(s)
Infrastructure	▪ The cellular and the landline components of the communications system in the affected area are susceptible to damage. ▪ Extended power outages will limit the use of the internet, cell phones, and non-battery radios by the survivors.
Alerts and 911	▪ The ability of the Territory's Emergency Operations Centers to communicate with the public will be a critical concern, especially if further evacuations are required.
Responder Communications	▪ Because Situational Awareness will be difficult to get and disseminate, building a Common Operating Picture and coordinating response efforts will be challenging. Efforts to deploy and employ resources effectively will become more complicated. Federal responders, however, will have access to satellite telephones and point-to-point (P2P) communications systems to ensure viable communications across the Response.
Financial Institutions	▪ The viability of the Territory's financial institutions will be affected by the hurricane. ▪ Power outages will impact the ability of automated teller machines to dispense cash and local businesses will be unable to process credit card or debit card transactions.

Regional leaders will communicate with the Territory and FEMA Headquarters using satellite and radio communications to gain national coordination and Situational Awareness. The interdependencies of the communications, power, and transportation infrastructure will affect the timelines for the response to and the restoration of the communications sector. In heavily damaged areas, the only means of communication will likely be Radio Frequency (RF) (e.g., satellite telephones). Households in mountainous areas of the Territory are likely to sustain moderate to severe damage from land subsidence and residents will be isolated for an extended period of time.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-5. The initial goals include:

- Establish capabilities for interoperable voice and data communications among federal, territorial, and district first responders, the emergency response community, and the affected population.
- Restore enough of the communications infrastructure to support repair teams and all lifesaving and life-sustaining activities.

- Provide timely communications in support of public safety, security, and response operations, and Situational Awareness is shared with the affected community and all the response forces in impacted areas, using all available resources.

Table 2: Critical Tasks for the Components of the Communications Infrastructure

Phase	Critical Task(s)
Phase 1a	▪ Operational communications focus on planning, training, and exercising as well as assessing communications capabilities if an incident occurs. ▪ Convene meetings with federal, territorial, and private-sector communications leaders, as appropriate, to implement the first actions of the Concept of Operations.
Phase 1b and 1c	▪ Assess and facilitate interoperable communications for response and support operations. ▪ Identify potential staging areas for the Mobile Communications Operations Vehicles (MCOV).
Phase 2a	▪ Assess the status of command, control, and communications, including lines of communication outside the affected area with the FEMA CAO, the Region 2 RRCC, VITEMA EOC's, and identify the requirements and priorities for the area's restoration. ▪ Source and deploy 2 Disaster Emergency Communications (DEC) Packages. 1 for St. Croix and 1 for St. Thomas. ▪ Source 7 Mobile Emergency Response Support (MERS) Detachments; 3 for St. Croix, 2 for St. Thomas, and 2 for St. John.
Phase 2b	▪ Source and deploy an ad-hoc communications package. ▪ Deploy 17 Mobile Emergency Response Support (MERS) Detachments. ▪ Determine leadership support requirements in the affected area, including VITEMA EOC's, FEMA facilities, and FEMA field teams. ▪ Mission assign and deploy an additional DOD communications specialist.
Phase 2c	▪ Coordinate with whole-community partners to get additional support, if needed, from: • FEMA's National Communication System (NCS); Department of Homeland Security's Office of Emergency Communications (OEC); National Telecommunications and Information Administration (NTIA); Department of Energy (DOE); Federal Communications Commission (FCC); Sprint; AT&T

Table 3: Critical Tasks for Responder Communications

Phase	Critical Task(s)
Phase 1a	▪ Coordinate planning for operational communications with the whole community. ▪ Develop, review, and distribute Federal disaster emergency communications planning information to Support Agencies.
Phase 1b and 1c	▪ Request and deploy MERS communications and logistics support and deploy MCOV's to ISB's and other locations, as needed.
Phase 2a	▪ Source and deploy communication specialists to the USVI in support of the IMAT. ▪ Push communications capabilities forward to responders at the incident's location.
Phase 2b	▪ Assess and re-establish, if needed, enough communications infrastructure (i.e., PSAP 911 and EAS) in the affected area to support continuous life-sustaining activities, the provision of basic human needs, and the transition to Recovery. ▪ Source and deploy an ad-hoc communications package. ▪ Determine leadership support requirements in the affected area, including VITEMA EOC's, FEMA facilities, and FEMA field teams. ▪ Mission assign and deploy an additional DOD communications specialist.
Phase 2c	▪ Coordinate with whole-community partners to get additional support, if needed, from: • FEMA's National Communication System (NCS); Department of Homeland Security's Office of Emergency Communications (OEC); National Telecommunications and Information Administration (NTIA); Department of Energy (DOE); Federal Communications Commission (FCC); Sprint; AT&T

Table 4: Critical Tasks for the Components of Financial Institutions

Phase	Critical Task(s)
Phase 1a	▪ Provide the financial and other assistance to the Government of the USVI under Presidential authorization of the Stafford Act
Phase 1b and 1c	▪ The use of the Surge Account will be determined by the Regional Administrator to pre-position federal resources in anticipation of a presidentially declared emergency or major disaster
Phase 2a	▪ The Private Sector Liaison shall assess the status of financial institutions
Phase 2b	▪ Determine leadership support requirements in the affected area, including VITEMA EOC's, FEMA facilities, and FEMA field teams. ▪ Activate the Department of the Treasury to deploy pallets of cash to banks in the USVI as a supplemental loan. ▪ Deploy ESF #11 (Dept of Agriculture) to issue EBT paper vouchers until card readers are operational.
Phase 2c	▪ Identify the additional support that may be needed to supplement or back-fill current efforts.

4 End State and Stabilization

The stabilization of the Communications Lifeline in the wake of a hurricane depends on the stabilization or the return to services of the Energy (Power and Fuel) Lifeline.

Table 5: The Stabilization of the Components of the Communications Lifeline

Lifeline Component	End State	Pre-Incident Planning
Communications Infrastructure	▪ Reliable cellular, landline, and fiber-optic networks as well as related infrastructures have been fully restored. ▪ Survivors have access to commercial communications infrastructure to contact or be contacted by emergency services or personal contacts.	▪ The appropriate private and public parties actively engaged in pre-incident planning for potential damage to or interruption of communications in the affected communities. Planning includes preparation of temporary power generation or redundant systems.
Alerts and 911	▪ Public safety answering points are now available to the public.	▪ Maintain the functionality of the emergency-alert notification systems and the structural stability of the 911 call center.
Responder Communications	▪ First responders and field deployed staff using operable and redundant communications systems and procedures to enable operational coordination using available communications systems	▪ First responders and FEMA are pursuing purchase, maintenance, and distribution of satellite phones as a redundant communication system.
Financial Institutions	▪ The survivors now have access to financial services.	▪ Public outreach efforts through Preparedness and CPCB to ensure survivors understand the need for access to cash stores or alternate banking locations.

5 Authorities

The Region 2 Disaster Emergency Communications Coordinator (DECC) is the ESF #2 – Communications Coordinator. DHS is the LFA and the SSA for events related to communications. As the SSA representative, DECC is responsible for bringing together leaders in business and government to prepare for and protect against the hazards facing the communications sector in the wake of a hurricane.

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Appendix I-6: Lifeline – Transportation

1 Introduction

The Transportation Community Lifeline comprises the infrastructure, resources, and personnel needed to mobilize response resources and will need to be maintained and/or restored in the event of a hurricane. In the wake of a hurricane, the transportation infrastructures in the affected area, including airports, highways, ferries, seaports, and other types of infrastructure in the affected area will be severely degraded. In the days and weeks following the hurricane, fuel, power, and communications systems will be unavailable in much of the affected area. Because these systems are interconnected with the transportation infrastructures, their unavailability makes the restoration of the transportation infrastructures even more challenging.

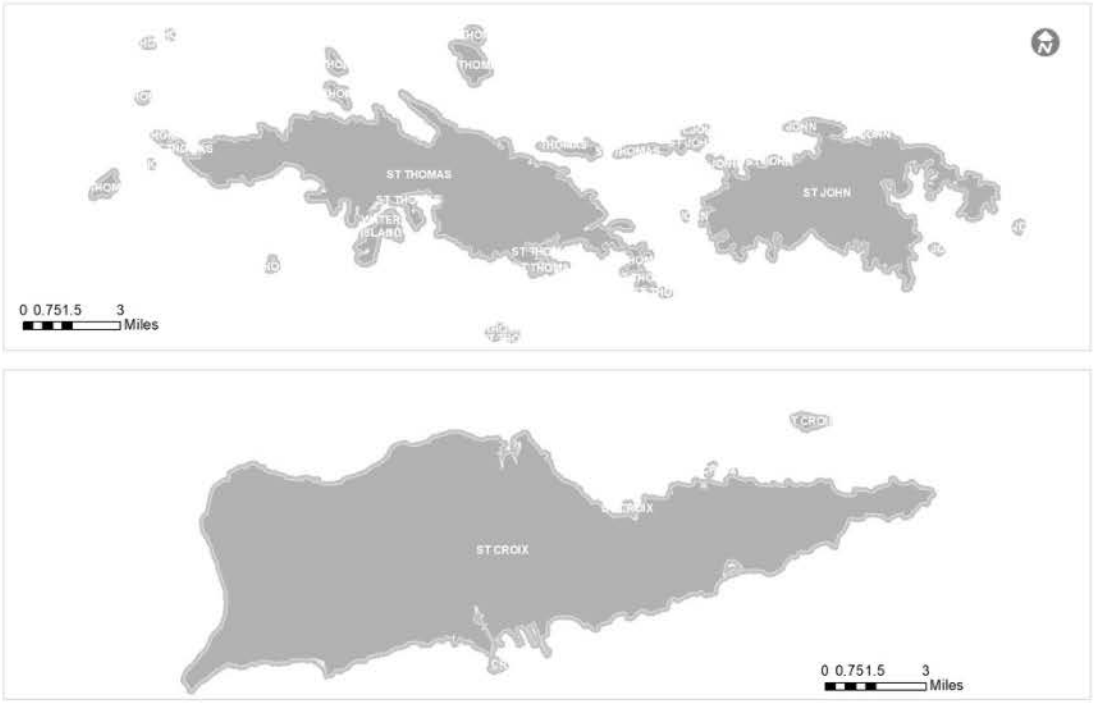

Figure 1: Transportation Infrastructures

2 Impacts

The Territory relies on a fully operational transportation system for the day-to-day movement of people and supplies. A hurricane will cause choke points in critical transportation pathways (i.e., highways and roadways, airports, and seaports), which could interrupt or impede the supply chain and the deployment of first responders.

Table 1: Impacts on the Components of the Transportation Lifeline

Lifeline Component	Impact(s)
Highway and Roadway	▪ At least 1,136 miles of highways and roads will be affected by the hurricane. The impact of the hurricane on highways and roadways will severely limit the transport of durable goods and commodities to the affected area.
Mass Transit and Railway	▪ Although buses will feel the impact of the hurricane for a few days, they will be able to resume service if the roadways are clear and enough fuel is available.
Aviation	▪ The Cyril E. King Airport should be partially operational within 7 days, unless the hurricane makes a direct strike. ▪ The Henry E. Rohlsen Airport will reopen on the southern part of St. Croix unless the cascading impacts of the hurricane and/or a second strike delay the reopening.
Maritime	▪ All seaports will remain closed for the first 3 days. The seaports that did not suffer a direct strike will reopen first. ▪ Seaports that suffered a direct strike could be closed for up to 90 days, if not longer, for the clearance of debris and hazardous materials. Closures and/or restrictions during daylight hours might be necessary.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-6. The Priorities of Effort include:

- Establishment of tactical transportation systems, functional transportation nodes, and response capabilities to deliver critical personnel, equipment, and services for search and rescue operations as well as medical care and evacuation of survivors.
- Establishment of capabilities to deliver response assets and services and to open critical airports, ferry systems, and maritime ports. Develop priorities with the Territory to implement response, repair and restoration efforts; and to provide resources for moving responders, resources, supplies, commodities, medical evacuees, and survivors as well as their pets to and from all Areas of Operation.

ESF #1 – Transportation is responsible for the main components of the Critical Transportation Core Capability. ESF #1 will coordinate sourcing with, among others:

- ESF #2 – Communications;
- ESF #3 – Public Works and Engineering;
- ESF #7 – Logistics Management and Resource Support;
- The Air and Marine Operations Branches; and
- The Critical Transportation Task Force.

FEMA will be responsible for other elements of the Critical Transportation Core Capability, such as providing contracting support or mission-assigning Other Federal Agencies (OFA) to provide transportation resources.

Table 2: Critical Tasks for Highways and Roadways

Phase	Critical Tasks
Phase 1a	▪ Establish a GeoPlatform for the incident to share Situational Awareness. ▪ Identify and catalog a national inventory of engineering resources (e.g., academics, retired engineers, and members of professional associations, such as the Society of American Military Engineers' Emergency Preparedness and Homeland Security Committee and the American Society of Civil Engineers) to develop a surge capacity for planning efforts and lower-level damage assessments.
Phase 1b and 1c	▪ Request transportation waivers and regulatory relief, and coordinate permitting and exemptions for the required modes of transportation. ▪ Coordinate resources with federal interagency partners to expand capacity to quickly deploy personnel and resources to facilitate the delivery of the Critical Transportation Core Capability and the Transportation Lifeline during the Response.
Phase 2a	▪ Identify roadways that are available for immediate use; manage and coordinate the restoration of transportation services and needs. ▪ Request the DOT to deploy assessment teams. ▪ Request USACE to deploy engineering support for initial assessments. ▪ Determine the location of the ISB, ascertain the staging areas for USVI districts, and identify the transportation needs and the availability of resources. ▪ Request the DOT Federal High Administration (FHWA) initiate local contracts in support of assessment/clearing of national roadways to establish initial main supply routes. ▪ Source all-terrain vehicles. ▪ Coordinate with Federal departments or agencies for emergency waivers, including: VIDOT - Hours-of-Service for drivers and size and weight for trucks; DHS -Jones Act; EPA -Fuel-quality; and Initiate other emergency waiver requests to facilitate evacuation, as necessary
Phase 2b	▪ Coordinate with ESF #6 to distribute commodities, as necessary if requested by the Territory. ▪ Coordinate with ESF #6 to provide transportation for the relocation of survivors. ▪ Coordinate the use of intra-island transport modes with the Territory. ▪ Activate the DOT to provide a Routing Assistance Hotline (RAH) for planning purposes provide the best and safest routing information available.
Phase 2c	▪ Activate all on-island emergency contracts for transportation services. ▪ Deploy the all-terrain vehicles purchased in the CONUS.

Table 3: Critical Tasks for the Mass Transit Components

Phase	Critical Task(s)
Phase 1a	▪ Establish a GeoPlatform for the incident to help share Situational Awareness. ▪ Identify and catalog a national inventory of engineering resources (e.g., academics, retired engineers, and members of professional associations, such as the Society of American Military Engineers' Emergency Preparedness and Homeland Security Committee and the American Society of Civil Engineers) to develop a surge capacity for planning efforts and low-level damage assessments.
Phase1b and 1c	▪ Request transportation waivers and regulatory relief, and coordinate permitting and exemptions for the required modes of transportation. ▪ Coordinate resources with federal interagency partners to expand capacity to quickly deploy personnel and resources to facilitate the delivery of the Critical Transportation Core Capability and the Transportation Lifeline during the Response.
Phase 2a	▪ Identify roadways that are available for immediate use; manage and coordinate the restoration of transportation services and needs. ▪ Request the DOT to deploy assessment team. ▪ Request USACE to deploy engineering support for initial assessments. ▪ Request the DOT Federal High Administration (FHWA) initiate local contracts in support of assessment/clearing of national roadways to establish initial main bus routes.

Phase	Critical Task(s)
Phase 2b	▪ Coordinate the use of intra-island transport modes with the Territory. ▪ Contract and deploy debris removal agency if needed for supplementary efforts. ▪ Private Sector Liaison coordinates with ride-sharing companies to volunteer or to contract for transportation alternatives.
Phase 2c	▪ Activate all on-island emergency contracts for transportation resources.

Table 4: Critical Tasks for the Aviation Components

Phase	Critical Task(s)
Phase 1a	▪ Assign and deploy appropriate personnel to Aerial Points Embarkation and Debarkation. ▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Territory. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.
Phase 1b and 1c	▪ Activate the Federal Aviation Administration's (FAA) Operations Liaison to the Air Operations Branch or its equivalent. ▪ Submit Aerial Embarkation Enabler Mission Assignments for approval.
Phase 2a	▪ Coordinate with the FAA, DOD, DHS, and the Territory to identify airports, on-island, and Caribbean assets that are available for immediate use. ▪ Source and deploy DOD and FAA Airfield Assessment Teams. ▪ DOD will provide initial airfield management and material handling operations in the USVI if Cyril E. King or Henry E. Rohlsen are not available for initial use. ▪ FAA support requirements are to provide airfield assessment, navigational aid systems (NAVAIDS), and air traffic control. ▪ Collaborate with the USVI, FAA, the Private Sector Liaison, and the GSA to assess any remaining on-island material-handling equipment, capabilities, and availability. Coordinate the use of, or the leasing of, the available equipment to support the Air Points of Debarkation (APOD). ▪ Coordinate with FAA, DOD, DHS, and GSA for CONUS based air-lift support. ▪ If required, based on assessments, source and deploy DOD assets to establish the APOD and provide material handling equipment (MHE). ▪ Initiate other emergency waiver requests to facilitate evacuation, as necessary.
Phase 2b	▪ Coordinate with mass care to provide commodities distribution actions, as necessary and if requested by the Territory. ▪ Coordinate with mass care services to provide transportation for the relocation of survivors. ▪ Request FAA to deploy a Mobile Airport Traffic Control Tower (MATCT), using C-17 or other aircraft, if necessary, at key airport locations. ▪ Request FAA to deploy Mobile Asset Management Program (MAMP) assets to supplement damaged airport facilities. ▪ Coordinate with the Territory for the use of intra-island transport modes.
Phase 2c	▪ Activate all on-island emergency contracts for transportation resources.

Table 5: Critical Tasks for the Maritime Components

Phase	Critical Task(s)
Phase 1a	▪ Assign and deploy appropriate personnel to Maritime Points of Embarkation and Debarkation. ▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Territory. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.
Phase 1b and 1c	▪ Conduct conference calls with the RRCC, (NRCC, DOD, and contractors to determine the availability of maritime transport assets. ▪ Mission assign MARAD for the deployment of vessels for the lodging and billeting of responders. ▪ Coordinate with ESF #1 to get the available resources from MARAD. ▪ Initiate a MARAD ship availability report for safe-store, berthing, command and control and port restoration support

Phase	Critical Task(s)
Phase 2a	▪ DOD, USCG, and DHS to identify the seaports that are available for immediate use to manage, coordinate, and restore continuous transportation services. ▪ Coordinate with DOD, DHS, and the Territory to identify seaports, on-island, and Caribbean assets that are available for immediate use. ▪ Source and deploy USACE side scanning sonar unit to support port clearance by the USCG. USCG will begin to assess the situation as soon as conditions permit. Acquiring a local sonar unit through a contract is an alternative solution. ▪ Collaborate with the USVI, the Private Sector Liaison, and the GSA to assess any remaining on-island material-handling equipment, capabilities, and availability. Coordinate the use of, or the leasing of, the available equipment to support the Seaports of Debarkation (SPOD). ▪ Coordinate with FAA, DOD, DHS, and GSA for CONUS based sea-lift support. ▪ Coordinate with Federal departments or agencies for emergency waivers, including: VIDOT - Hours-of-Service for drivers and size and weight for trucks; DHS -Jones Act; EPA -Fuel-quality; and Initiate other emergency waiver requests to facilitate evacuation, as necessary.
Phase 2b	▪ Coordinate with mass care to provide commodities distribution actions, as necessary and if requested by the Territory. ▪ Coordinate with mass care services to provide transportation for relocation or lodging for sheltering of survivors. ▪ Coordinate with the Territory for the use of intra-island transport modes.
Phase 2c	▪ Identify the additional support that might be needed to supplement or back-fill current response efforts.

4 End State and Stabilization

Multimodal routes (i.e., air, rail, road, port) are cleared of debris and are accessible by standard or alternative means of transport.

Table 6: The Stabilization of the Transportation Lifeline

Lifeline Component	End State	Pre-Incident Planning
Highway and Roadway	▪ Highway and roadway infrastructure are restored, safe, and capable of handling the normal traffic flow.	▪ The identification of high-risk bridges in the National Bridge Inventory that require mitigation efforts.
Mass Transit and Railway	▪ Mass Transit inventory is reestablished, safe, and capable of handling normal bus traffic.	▪ Clearly define PSMAs for ESF #1 assets to be alerted/activated to support assessment of road impacts
Aviation	▪ Airports, airfields, and supporting infrastructure is reestablished and capable of handling normal air traffic.	▪ Clearly define PSMAs for ESF #1 assets to be alerted/activated to assess air traffic control capabilities.
Maritime	▪ Seaports and maritime infrastructure reestablished, fully accessible, and capable of handling normal marine traffic and port throughput.	▪ Clearly define PSMAs for ESF #1 and USCG assets to be alerted/activated to support the conduct of port assessments.

5 Authorities and Potential Waivers

5.1 Authorities

The Territory and district public works departments are responsible for emergency route clearance. The Territory may request support from the National Guard to assist with emergency route clearance. The Territory has contracts with the private sector to provide transportation support, which includes the delivery of fuel, vehicles, trucking, buses, and the services of structural engineers.

- DOT, coordinator for ESF #1, provides a status of transportation pathways and pipelines.
- USACE, coordinator for ESF #3, conducts debris clearance operations.
- FEMA and GSA, coordinators for ESF #7, coordinates or provides transportation assets.
- Defense Coordinating Officer (DCO) and the Defense Coordinating Element (DCE) provide subject matter experts, teams, equipment, and other assets to support the Transportation Lifeline in coordination with FEMA.

5.2 Potential Waivers

An Emergency Declaration by the President triggers the temporary suspension of certain federal safety regulations, including hours of service for motor carriers and their drivers who are engaged in specific aspects of emergency relief and/or provide vital supplies and transportation services in the affected area. Requests for waivers on fuel and hours of service may be made to the Federal Government and the Territory. Waivers on the Transportation Lifeline will be posted on two DOT websites:

- Federal Motor Carrier Safety Administration (FMCSA)
- Federal Highway Administration (FHWA)

Air transport, which is often costly, can be delayed by damage to several components of the airfield: perimeter fencing, lighting, and the traffic control tower. As an alternative, several ports in the Continental United States (CONUS) have been identified in the Caribbean AHP as ports of departure for supplies going to the Territory.

USVI is susceptible to a shortfall of shipping vessels based on Section 27 of the Merchant Marine Act of 1920 (Jones Act) restricting travel between domestic port only by US flagged ships. The Department of Homeland Security can issue a waiver of 46 US C. § 55102 (the "Jones Act") pursuant to 46 USC. § 501(a) in the interest of National Security. US Customs and Border Protection can communicate these waivers via its Cargo Systems Messaging Service under the topics of Trade Policy Updates. Information can be found on CBP website:

- US Customs and Border Protection.

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Appendix I-7: Lifeline – Hazardous Materials

1 Introduction

The Hazardous Materials Community Lifeline comprises the facilities and infrastructures that generate hazardous materials and the resources and personnel needed to mitigate their release, including the response and cleanup efforts.

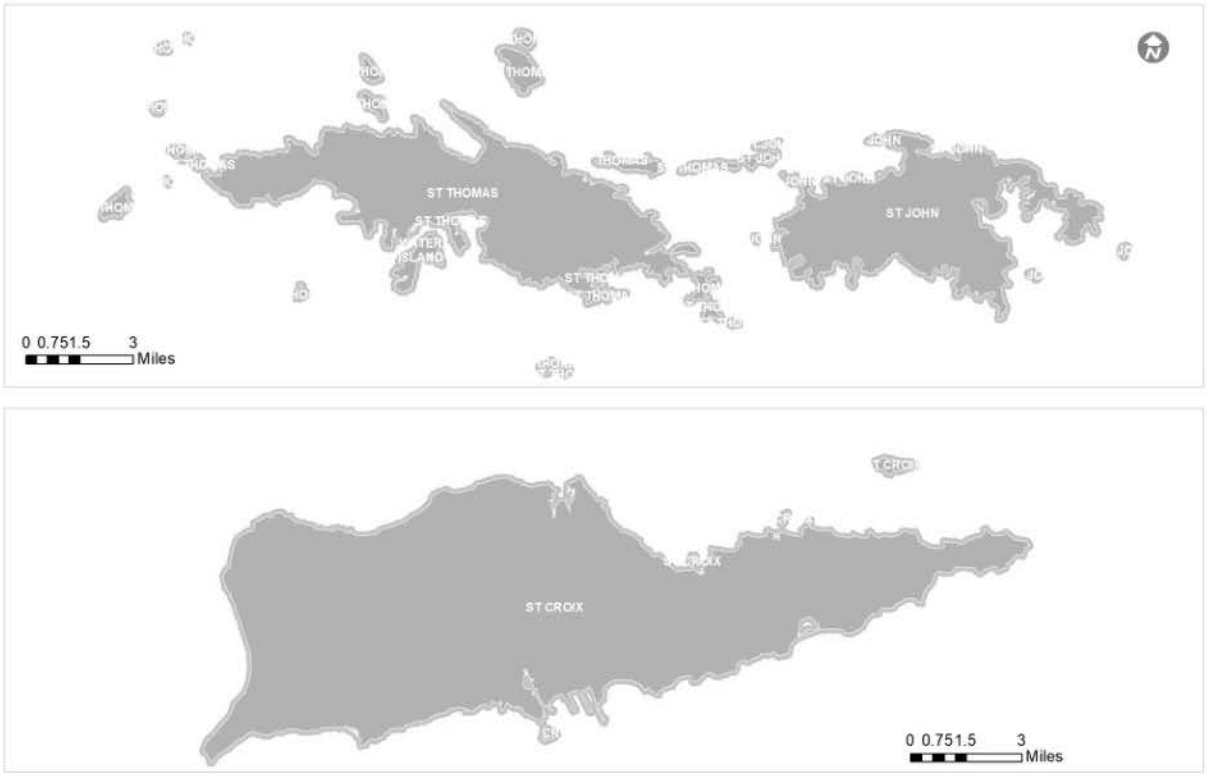

Figure 1: Hazardous Materials Sites

2 Impacts

The degradation and the inoperability of the Hazardous Materials Lifeline in the wake of a hurricane will result in contamination and generate bio-waste, which will jeopardize public health and safety. The release of lower-risk materials and the other impacts of the disaster will also affect public health and the environment (e.g., breaks in oil, gas, and sewer pipelines; contaminated potable water systems; and toxic dust and debris from collapsed buildings). The Response will be hindered by damage to the water, power, and fuel infrastructure. Minor releases of hazardous materials (HAZMAT) by small businesses, farms, and residences will be swept up in flood waters, which will spread low levels of contamination throughout the area of inundation.

Table 1: Impacts on Hazardous Materials Lifeline

Lifeline Component	Impacts
Facilities	▪ Most wastewater facilities will experience at least moderate damage. The full operation of these facilities is expected to resume as soon as power has been restored. ▪ Chemical manufacturing, landfills, and wastewater plants will experience minor to moderate damage. ▪ There will be leaks and breaks in wastewater and natural gas pipelines.
Hazardous Materials, Pollutants, and Contaminants	▪ Many oil containment facilities will experience at least moderate damage. The southern ports of St. Thomas and St. Croix will experience many leaks and breaks in the pipelines for fuel and natural gas. ▪ The hurricane will generate 500,000 tons of brick and wood debris and 310,000 tons of concrete and steel debris. ▪ There is one toxic release inventory site on St. Thomas that could contaminate potable water systems, which would have an environmental impact on native species.

3 Critical Tasks

The options and tasks listed below are for the consideration of personnel as they make decisions in a high intensity environment. These tasks are displayed collectively and sequentially in Annex X: Execution Checklist for the Caribbean AHP. These tasks do not constitute an all-inclusive list. Variations in impacts and conditions as well as the time of the year and the incidence of unpredictable situations might require actions that are not considered in Appendix I-7.

Table 2: Critical Tasks for Facilities

Phase	Critical Task(s)
Phase 1a	▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Territory. ▪ Establish a GeoPlatform for the incident to share Situational Awareness.
Phase 1b and 1c	▪ Ascertain the status of critical public facilities, including the number of completed assessments. ▪ Leverage the use of GIS assets (e.g., GeoHealth, which identifies healthcare and emergency medical facilities), that are located within the incident area and can be used to support response operations.
Phase 2a	▪ Request technical assistance from OSHA under the Worker Safety and Health Support Annex of the National Response Framework (NRF). ▪ Conduct safety briefings on personnel and equipment at all staging areas regardless of activity. ▪ Verify all qualifications, (including medical, etc.) of responders who will be engaged in activities in and around HAZMAT sites and are required to wear personal protective equipment (PPE). ▪ Provide information to responders on safety, restrictions on movement (e.g., traffic), and protective actions to be taken. ▪ Source the USCG VOSS package and local tugs and vessels to facilitate its use. ▪ Execute existing on-island and CONUS emergency and rapid response services contracts for initial support based on the need for spill or release containment.
Phase 2b	▪ Deploy the EPA ERT, the On-Scene Coordinator, and the USCG VOSS package. ▪ Deploy a second ERT and an additional On-Scene Coordinator. ▪ Coordinate with the Territory for temporary storage/disposal sites of HAZMAT. ▪ Provide information, in coordination with ESF #15 and ESF #4, about on-island HAZMAT areas and applicable protective action guidance. ▪ Source and deploy DoD Environmental, Safety and Occupational Health Compliance Assessment and Management Program (ESOHCAMP) teams if needed for supplementary hazard assessment and remediation.
Phase 2c	▪ Source and deploy re-supply material for deployed teams, as needed.

Table 3: Critical Tasks for Hazardous Materials, Pollutants, and Contaminants

Phase	Critical Task(s)
Phase 1a	▪ Coordinate actions, assets, and resources between other federal departments and agencies and those of the Territory. ▪ Issue regulations through the EPA and the USCG and provide oversight under the federal laws that establish the requirements for the remediation of oil spills and the releases of hazardous materials by local governments, including contingency planning for the needed facilities and vessels.
Phase 1b and 1c	▪ Coordinate with ESF #10 to pre-position equipment and personnel for a rapid response. ▪ Deploy ESF #10's Environmental Response Teams (ERT).
Phase 2a	▪ Source and deploy EPA for HAZMAT surveillance aircraft (ASPECT) to conduct flyover missions of USVI to determine potential HAZMAT release sites (range of airframe will necessitate indirect flight paths, possible using a Miami to USVI flight path). ▪ Ensure the health and wellbeing of the traditional and atypical responders engaged in lifesaving and life-sustaining operations. ▪ Provide responders information about safety, restrictions on movement (e.g., traffic), and protective actions to be taken. ▪ Activate the Civil Air Patrol to fly missions to capture images of high-level debris concentrations.
Phase 2b	▪ Source and deploy the full USACE Debris Planning and Response Team. ▪ Contract and deploy debris removal agency if needed for supplementary efforts.
Phase 2c	▪ Source and deploy re-supply material for deployed teams, as needed.

4 End State and Stabilization

All the contaminated sites have been identified and all hazardous materials have been contained.

Table 4: Stabilization of Hazardous Materials Lifeline

Lifeline Component	End State	Pre-Incident Planning
Facilities	The capabilities for removing and processing wastewater have been fully reestablished in compliance with environmental statutes and regulations.	Potential wastewater issues are identified, and resources are in place to meet the requirements for the emergency repairs and the restoration of the facilities.
Hazardous Materials, Pollutants, and Contaminants	Coordinated operations involving all levels of government, the responsible parties, and the partner organizations have minimized the public health and environmental risks from oil spills and the releases of hazardous materials.	The appropriate public and private parties actively engaged in pre-incident planning for a HAZMAT release in the affected community.

5 Authorities and Potential Waivers

5.1 Authorities

The EPA and the USCG are the ESF #10: Oil and Hazardous Materials Response coordinators. The EPA, under their own authority, is responsible for the oversight of hazardous materials, including the resources and support to mitigate against hazardous material release, response to such a release, and the cleanup efforts. As the ESF 10 lead, the EPA will coordinate the remediation and removal of hazardous materials generated during the disaster.

5.2 Potential Waivers

- The Department of Transportation can issue a temporary waiver for Hours of Service for transporting Hazardous Materials during a disaster.

- The Environmental Protection Agency (EPA) can issue a waiver that will take effect post-incident for:
  - A No Action Assurance Memorandum that allows the loading and unloading of fuel without the use of vapor recovery or vapor combustion devices at bulk marine loading terminals and truck racks associated with them.
  - A temporary waiver of penalties for excess emissions

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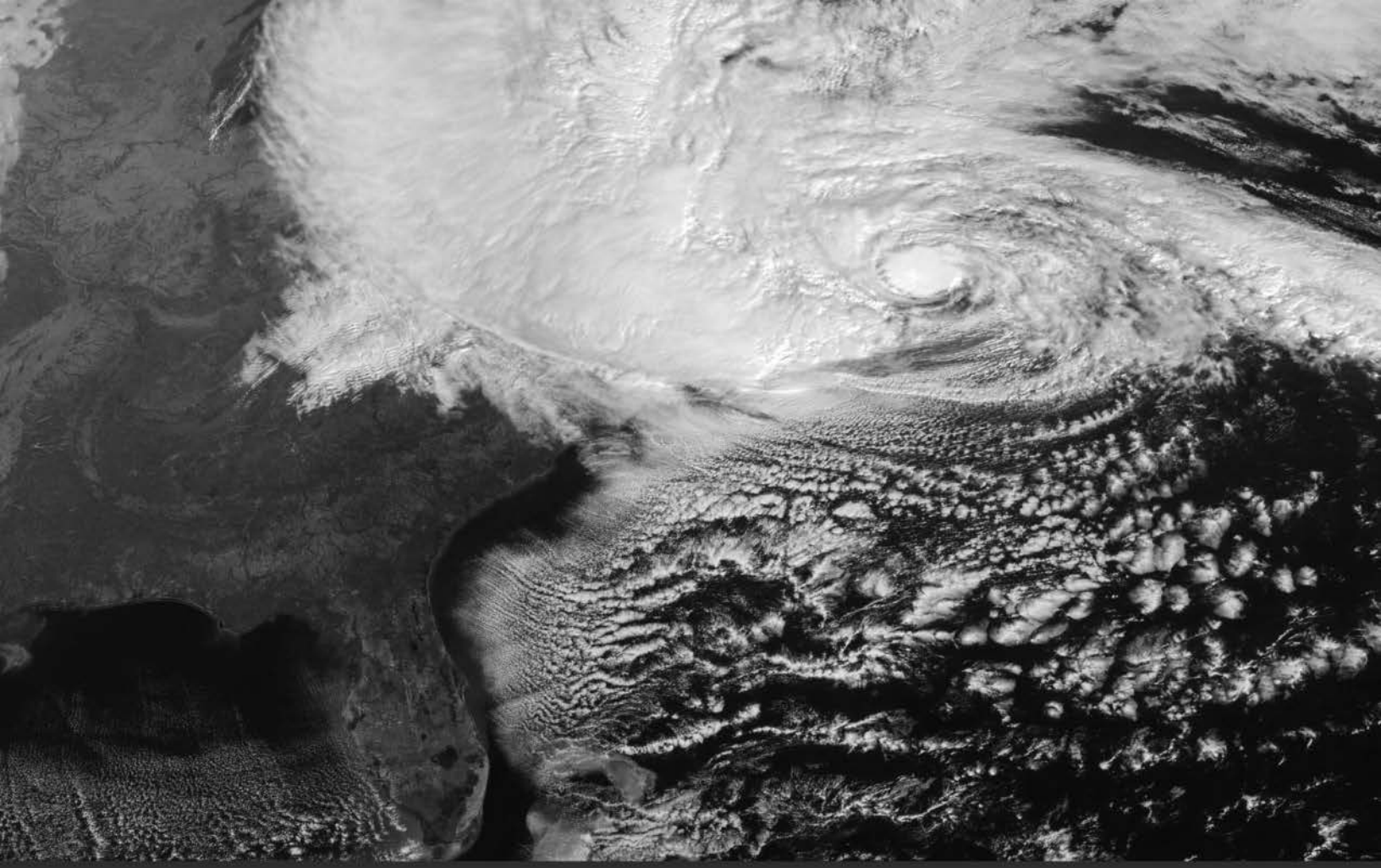

FEMA Region II Hurricane Annex for New York & New Jersey

June 1, 2014

FEMA

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Table of Contents

Purpose

The FEMA Region II Hurricane Annex for New York and New Jersey expands the concepts within the All Hazards Plan to better describe the missions, policies, responsibilities, and coordination processes across emergency response operations for a notice event which require specialized or unique responses. Although it is named a "Hurricane" annex for general understanding, the purpose of this annex is to support the expedited jurisdictional response to all threatening tropical cyclones, including hurricanes, tropical storms and depressions, and their secondary impacts on locations in New York and New Jersey. It is to be used in conjunction with the All Hazards Plan, and is not an exclusive independent document.

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 prior to 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, tornadoes, 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 Wind 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 adjacent coastal towns. The next day the hurricane moves out. The rain associated with the storm has caused rivers to overflow their banks, and several river systems are experiencing record flood levels.

Although tropical cyclones 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.

See the section entitled Regional Considerations in Tab 1 to Appendix 1: Risk Management for a description of the background, history and potential impacts of tropical cyclones to the New Jersey and New York area of FEMA Region 2.

Scope

This Hurricane Annex describes how the Federal Government, through FEMA Region II, supports local and state governments, and tribal nations in New York and New Jersey to save lives, and to reduce risk to both 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 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 State 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 Atlantic Coast. 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, state 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 response and initial recovery actions; setting favorable conditions to stabilize the incident and for long-term recovery for New York and New Jersey.

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 Regional Response Coordination Center (RRCC) will be activated and operational 120 hours before onset of tropical storm force winds. The RRCC is a standing facility in each Region activated to coordinate regional response efforts through conference calls, video-teleconferences, etc. Staffing is through a Regional Incident Support structure. The RRCC

supports field elements, including the Incident Management Assistance Teams (IMAT) and the Federal Coordinating Officer (FCO).

- FEMA will coordinate with the states to provide liaison officers and representatives to the appropriate State Emergency Operations Centers (SEOCs) 96 hours before the onset of tropical storm force winds or when requested by the respective State Emergency Manager.
- FEMA Region II will establish an interim operating facility (IOF) within theatre 72 hours before the onset of tropical storm winds. The IOF will be staffed by the IMAT and when feasible, co-located with or within close proximity to the SEOCs.
- 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.

The following factors highlight operational considerations necessary to aid in the response of a notice incident. These items are supplemental to the critical considerations outlined within the All Hazards Plan.

- **Weather Forecasting:** The National Hurricane Center (NHC) forecast track errors have been steadily decreasing over the past few decades. The errors are currently about half of what they were 15 years ago. Intensity errors have improved slightly over the past couple of decades. On average, intensity forecasts are off by one Saffir-Simpson category. Forecast uncertainties tend to be greater the farther you are away from landfall. These uncertainties must be taken into account when attempting to stage and deploy resources. Sometimes there can be days of notice; other times, just hours.
- **Travel Restrictions:** Travel restrictions implemented by local and state authorities or the private sector before or after tropical storm winds may affect Federal interagency operations.
- **Resource Movement/Staging:** Pre-positioning/pre-staging is limited after a certain point in time due to the proximity of the storm.
- **Lead Time Required to Conduct Mass Evacuations:** It may be necessary to activate plans as much as 72 hours prior to the time an evacuation is likely to be ordered. Resources, whether they be Federal, state, or local, may need to be mobilized as much as 48 hours prior to the start of evacuations to have sufficient capacity in place once the evacuation order is given. States may have variant policies or protocols regarding recommendations for the timing of evacuation orders.
- **Evacuation Routes May be Overwhelmed:** If evacuations are ordered too late, 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 a mass 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.

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 operations in the States of New York and New Jersey. 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.

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.

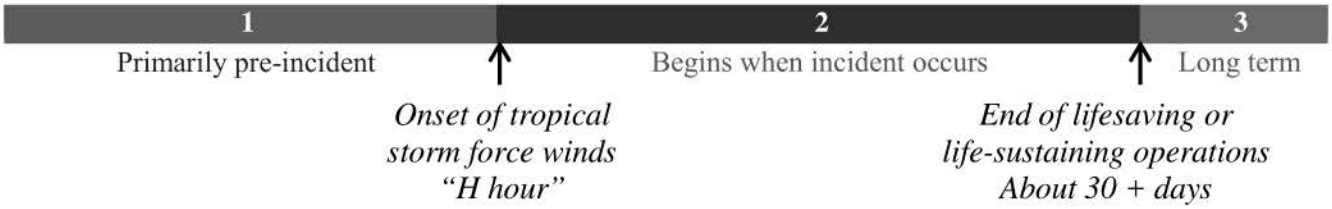
Given the advances in weather forecasting and storm tracking, there is lead time to give advance warning to the public and coordinate with local, state, and tribal emergency managers. A tropical cyclone affects multiple jurisdictions, so Federal hurricane operations must be forward-leaning and flexible to be effective.

Prior to, and during, a tropical cyclone event, 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.

Operational Phases

Operational phases provide a common structure for organizing tasks and actions over time. While distinct in time, phases are distinguished by the character of the activity performed during them, and are assigned discrete end states which define the conditions which need to be met for the phase to be complete. The phased approach groups tasks into common operating periods shown in Figure 1.

Figure 1: FEMA Common Operational Phases



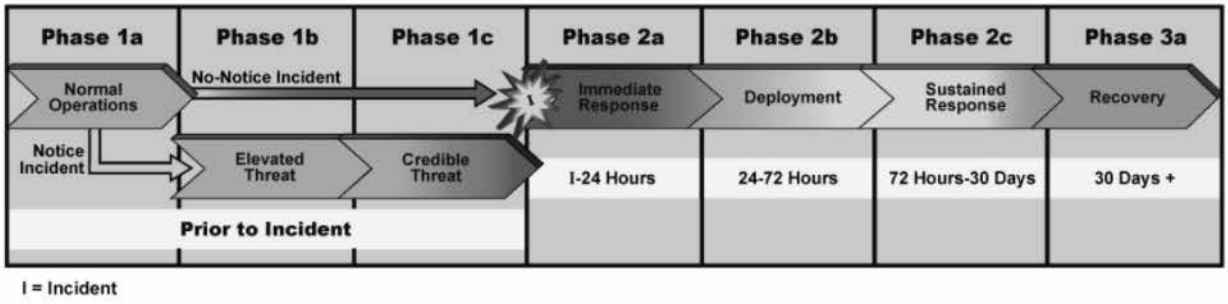
Phase 1 encompasses pre-incident actions that should occur before the onset of tropical storm force winds. It is a commonly accepted indicator of when to stop activities (as conditions are unfavorable and dangerous to operate in). For instance, all evacuations should be completed before this happens.

Phase 2 begins with the onset of tropical storm force winds. Initial efforts are normally focused on life-saving and life-sustaining actions, and systems recovery.

Phase 3 is associated with long-term recovery. It begins with the end of lifesaving or life sustaining operations. This is typically more than 30 days after Phase 2 begins.

Each of the three phases is divided up into sub-phases as shown in Figure 2. Phasing includes descriptions of "H" minus or plus a certain number of hours. "H-hour" occurs with the onset of tropical storm force winds.

Figure 2: Operational Phases.
(Note that Incident (I) is the onset of tropical storm force winds)



This document attempts to include 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 1

Since tropical cyclones are notice incidents that allow responders to plan up to several days in advance of impact, this annex includes Phase 1. This phase is divided up into three sub-phases: 1a, 1b and 1c.

Phase 1a – Normal Operations / Monitoring (Over H-120 hours)
Phase 1a is associated with normal operations that are continuous and ongoing, or it is associated with monitoring a tropical disturbance or more intense storm system that is present in the Atlantic or Caribbean basin. The storm is such a significant distance away from the NY/NJ Area of Responsibility (AOR) that this is "steady state" for the RRCC and response operations. At this time, the Region II Response Watch Center is functioning under their standard operating procedures.

Phase 1b – Elevated Threat (H-120 hours to H-72 hours)
This phase is associated with increased likelihood or elevated threat and developing situational awareness. Selected teams are alerted and may be activated and deployed. It starts when the onset of tropical storm force winds are forecast to be about 5 days away, that is, when the National Hurricane Center's 5-day Track Forecast Cone includes or is near the NY/NJ area.

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. The Enhanced Watch will be staffed by subject matter experts from Planning, Situational Awareness (HLT point of contact), Mission Assignment, External Affairs and GIS that best fits the needs of the impending threat. As needed, the Enhanced Watch staff will disseminate an Operational Summary, to detail activities throughout the Enhanced Watch level of activation.

Phase 1c – Credible Threat (H-72 hours to H-hour)
Phase 1c is associated with a credible threat. Resources are pre-positioned in anticipation of support needed by States. This phase starts when tropical storm force winds are forecast to be about 3 days away, the National Hurricane Center's 3-day Track Forecast Cone includes or is near the NY/NJ area, that is, the moment the 3-day forecast cone includes and remains within the NY/NJ AOR.

The Region II RRCC will activate to a Level III and begin preparing for an increased activation and potential land-falling event. This includes notifications to all response-related personnel (IMAT, RRCS, reservists, other Federal agencies, and 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 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 II or I; it is possible that some other Federal agencies (Emergency Support Functions (ESFs)) are activated at this time.

Phase 2

The transition from Phase 1 to Phase 2 occurs with the onset of tropical storm force winds and requires a federal response to support the States. Once 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 state and local governments. During this phase, damage assessments are performed in order to prioritize resources. Close coordination with the affected state(s) 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 state 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)
This phase is associated with activation, gaining situational awareness, movement of resources, deployment of response and recovery teams, and life-saving and rescue operations. Phase 2a can be considered the period of operations immediate at the onset of tropical storm force winds 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 specific requests, to provide the necessary resources to protect life and property. This is known in commonly used FEMA vernacular as “leaning forward”.

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

Phase 2b – Deployment (H+24 hours to H+72 hours)
This phase is associated with employment of teams at the incident site; providing for health and safety needs; sheltering; restoring critical systems, such as electrical power, water, and communications; and the establishment of organizational and coordinating-structures for long-term recovery. 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 the State to perform lifesaving, life sustaining measures and the other goals and objectives identified through unified

coordination. Search and rescue activities and movement of commodities are usually the most common activities occurring in this phase. Future Planning may also begin; the focus of future plans to be determined by State 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.

Note: The Executive Checklist (Appendix 5) provides high-level tasks to be accomplished at each Trigger Point in the H-hour sequence. These actions may not occur sequentially. In addition, if a tropical cyclone develops without a 3-day or 5-day forecast, selected actions may be compressed in order to complete preparations before onset of tropical storm force winds reach the coastline.

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 Response Watch Center. The message is processed and delivered to Region II staff and key partners as a Situation Awareness Alert (SAA). The Hurricane Liaison Team of the Response Division will provide recommendations for Alert/Activation-Monitor 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 Response Watch Center as per their SOP is Steady State. When an event requires more detailed/dedicated analysis RRCC activation 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 NY/NJ AOR) then RRCC activation can be raised to Level I which is "Full Activation." Level I includes all RRCC positions, staffed fully or 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).

Phase 3 – Recovery (+30 days)
Phase 3, which encompasses recovery and mitigation activities, can begin as early as Phase 2, but may continue for months or years depending on the damage. Typically, it starts about 30 or more days after the onset of tropical force winds. The Federal Government supports state and local governments and tribal nations with disaster assistance programs as necessary, ultimately through the Office of the Federal Disaster Recovery Coordinator (if appointed). Phase 3 is not subdivided; however, it is depicted and used as "Phase 3a" for consistency with the other phases.

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 necessary to achieve preparedness for response. The Region II All Hazards Plan and their respective objectives for each core capability were developed for a no-notice event. Consequently, their 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) that will supplement and/or replace the objectives in the All Hazards Plan. Table 1 below shows the All Hazards Plan objectives for each core capability. Table 2 shows the revised objective for the Hurricane Annex. Throughout the plan you will see the All-Hazards Plan Objective and when applicable the Hurricane-Specific objectives to illustrate the connections between the two.

Table 1: Core Capabilities with Region II All Hazards Plan (AHP) Objectives

Core Capability	Objective	Location of More Detailed Information
Planning	Within twelve hours of the incident event, develop Regional Support Plan adapting the Plan objectives to the level, hazard, scope, and consequences of an incident.	AHP, Annex C
Situational Assessment	Begin situational assessment within two hours and establish a Common Operating Picture (COP) with all affected jurisdictions within 12 hours of the incident event.	AHP, Annex C
Operational Coordination	Within 2 hours, establish Federal operational coordination within the RRCC and transition coordination efforts to field operations when field operations have operational capability.	AHP, Annex A
Public Information and Warning	Within 2 hours, link with impacted State or Territory to establish ESF-15 – External Affairs organization within 12 hours to provide public information to the impacted populations in coordination with State, local, and tribal, (State) impacted jurisdictions.	AHP, Annex F
Public Health & Medical Services	Triage requirements from multiple jurisdictions and prioritize emergency-level health and medical treatment resources to meet critical needs.	AHP, Annex C
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.	AHP, Annex C
Fatality Management	Make accurate assessment of fatalities in each incident and plan deployment of public and private resources to augment local medical examiners.	AHP, Annex C
Infrastructure Systems	Assess and prioritize critical infrastructure and key resources damaged by incidents and coordinate public and private sector resources that will reduce the further loss of life.	AHP, Annex C
Mass Care Services	Deploy mass care services for up to 25 percent of the impacted population.	AHP, Annex C
Mass Search & Rescue Operations	Assess air, sea, and structural search and rescue requirements and request deployment of assets, as needed.	AHP, Annex C
On-Scene Security and Protection	Within 24 hours, support impacted jurisdictions to re-establish public safety operations focusing on saving lives and protecting property.	AHP, Annex C
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.	AHP, Annex C
Critical Transportation	Determine the most appropriate transportation services that facilitate the response and support survivor needs within two operational periods.	AHP, Annex D
Operational Communications	Within 24 hours, facilitate restoration of basic communications among Federal and State response agencies in the affected communities and organizations.	AHP, Annex K

Table 2: Core Capabilities with revised Hurricane-Specific Objectives

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.	Appendix 1
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. The Hurricane Liaison Team will also coordinate critical information to support decision-making at the state and local levels in concert with the National Hurricane Center and the Mount Holly/ Upton Weather Forecast Offices	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.	Appendix 2
Public Information and Warning	Provide public information to the impacted populations in coordination with State, local, tribal, and territorial impacted jurisdictions.	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.	Appendix 2, Tab 2
Environmental Response / Health & Safety	No change.	Appendix 2, Tab 3
Fatality Management	No change.	Appendix 2, Tab 4
Infrastructure Systems	No change.	Appendix 2, Tab 5
Mass Care Services	No change.	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 the State.	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 the State.	Appendix 2, Tab 8
Operations Support / (Public and Private Services and Resources)	No change.	Appendix 3
Critical Transportation	No change.	Appendix 3, Tab 1
Operational Communications	Prior to landfall, complete hardening of telecommunications resources against deformation and power outages.	Appendix 4

Concept of Support

FEMA Region II supports local and state governments, and tribal nations consistent with statutory authorities and regulations, and consistent with the Region II All Hazards Plan.

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 a pre-landfall 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.
- Activate national level support contracts.
- 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 EEIs specific to hurricanes and other tropical cyclones:

- The storm's geographic location, size, wind speeds/category, intensity, forward speed, projected storm track and approach direction; the shape of the coastline; storm surge height, anticipated landfall time and place, and projected impacts.
- Forecasted weather and seas in the area, including anticipated storm surge, river flooding, rainfall and tornadoes, as well as risks from vulnerable water structures (i.e., levees, dams).
- Impacted population demographics, including total numbers affected, functional needs populations/locations.
- Estimated number of shelters and population
- Projected number not evacuating (utilize HES Studies)
- Local, state, and tribal evacuation plans, timelines, and instructions (including the evacuation of critical facilities such as hospitals, nursing homes, adult care facilities and prisons).
- Identification of local, state, tribal, and national-level priorities.
- Critical infrastructure and key resources in the potentially affected area
- Status of re-entry plans and information affecting the safe return of residents, such as the number of homes destroyed or damaged by wind damage or flooding.
- Pre-positioned FEMA assets/actions – ISB (and commodities), IMAT, LNO, etc

Critical Information Requirements (CIRs) are specific types of high-priority EEIs. What typically separates a CIR from an EEI is its urgency, such as a death or serious injury to a Federal responder, or actual major damage to critical infrastructure and key resources (CIKR).

Coordinating Instructions

When a state 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 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 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, and the Office of the Secretary of Homeland Security, is the executive agent for the Region II All Hazards Plan and this Hurricane Annex, and is responsible for management and maintenance. This 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.

Appendix 1: Planning

Unlike the All Hazards Plan, which is based primarily upon a no-notice catastrophic incident, the Hurricane Annex is based upon a notice event of a tropical cyclone. While uncertainty in forecasting should be considered in activation and pre-deployment of resources, the Track Forecast Error Swath and the Surface Wind-speed Probabilities issued by the National Hurricane Center (NHC) should be used to guide the pre-deployment of resources.

All Hazards Plan Objective: Within 12 hours, develop an Incident Action Plan adapting the objectives to the level, hazard, scope, and consequences to the incident.

Revised Hurricane 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.

Actions by Phase and ESF

Phase 1a – Monitoring / Normal Operations
End State: Plans have been exercised and tested across local, state, tribal, and Federal entities. Private sector and non-governmental 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 to prepare for a tropical cyclone and apply 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 data gathering operations including storm tracking and predictions.
- *Command Staff Section (CSS)/Planning Support Section (PSS):* Identify deficiencies or limiting factors in planned capability.
- *SAS:* Monitor information on the storm and begin to prepare for potential landfall.
- *SAS*: Notification from the Hurricane Liaison Team of pending landfall 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 to impacted states. While not expressly 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 this 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.

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
- Establish joint Federal/State incident objectives (goal is within 18 hours of notice to deploy).
- *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
- Develop a joint IAP with the state (goal is within 24 hours following the declaration), with the FCO and IMAT facilitating the development of the IAP.

- *PSS*: coordinate with the deployed IMAT(s) to ensure State priorities are reflected in the RSP.

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 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/h) or less.
Tropical Storm	34 knots (39 mph or 63 km/h) to 63 knots (73 mph or 118 km/h).
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 declines and the formative area retreats westward. By early October, the area of maximum occurrence returns to the western Caribbean. While there is notice ahead for 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.

Tropical cyclones can produce major hazards that cause threats to the human environments: storm surge or storm tide, high winds, tornadoes, and rainfall-induced flooding. Tropical cyclones typically grow in size as they head into colder waters of the North Atlantic because they start to fall apart and spread their impact over larger geographic regions. They also typically speed up as they reach North Carolina, which is critical for planning timelines and effects on anticipated impacts. 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. Major factors impacting New Jersey and New York include the storm size (defined as the radius of maximum hurricane force winds around the storm's eye); angle of approach to the coast; intensity, forward speed, the shape of the coastline; the width and slope of the ocean bottom (continental shelf); and local features such as barrier islands, bays, and rivers. 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; however, cyclones reaching Category 5 strength are not meteorologically supportable north of Virginia. 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 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 impacts to high profile vehicles and wind-related structural problems, but it could also impact evacuation planning. 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 that range from 1 to 5 (Table A1-2). Note that storm surge values do not correspond well to the wind categories of this scale. These categories are based only on winds and do not account for storm surge.

Table A1-2. Saffir-Simpson Hurricane Wind Scale

Strength	Wind Speed (Kts)	Wind Speed (MPH)	Types of Damage
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.
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.
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.

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.
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.

Tornadoes

Tornadoes induced by tropical cyclones 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 tropical cyclones remain highly unpredictable. For most, the heaviest rainfall is typically on the left side of the storm and begins near the time of arrival of sustained tropical storm winds; however, heavy rains in amounts exceeding 20 inches can precede an approaching tropical cyclone by as much as 24 hours. Unrelated weather systems can also contribute significant rainfall amounts within a basin in advance of a tropical cyclone.

Operational

During a tropical cyclone, core capabilities face impacts based on its size, angle of approach and 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 Tropical Cyclones

Core Capability	Projected Impact
Planning	For tropical cyclones, 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 tropical cyclone requires the establishment of command, control, and coordination across local incident commands and allocation of resources with local, state, tribal, territorial, and insular area governments; the private sector; and nontraditional providers.

Operational Communications	Communications entities establish and maintain functional and interoperable communications systems for local, state, tribal, territorial, insular area, and Federal response teams. After the tropical cyclone, 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, state, tribal, territorial, insular area, and Federal governments when communications systems have been affected or disabled.
Critical Transportation	All types of transportation systems are vulnerable to damage from a tropical cyclone. Flooding from its storm surge can flood roadway and subway 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 state and local governments with the transportation or evacuation of an affected population, and provide additional accommodations to the functional needs population and household pets. Following the tropical cyclone, there will be a lack of detailed transportation assessments by state and local officials because of inadequate resources and degradation of the transportation infrastructure.
Environmental Response / Health and Safety	High winds and flooding from a tropical cyclone can cause various environmental hazards for responders and the public. Sewage treatment systems can be flooded and release waste into fresh water systems. Chemical product 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, state and tribal government Environmental Response/Health and Safety (ERHS) resources will be overwhelmed during the response and require Federal support. 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-state or multi-region incident.
Fatality Management	Local and state fatality management operations directed by the state 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 local and state 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 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 tropical cyclone 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 tropical cyclone when local and state

	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 tropical cyclone. 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 storm 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 local and state 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 states and FEMA regions.
Public Health and Medical Services	Prior to a tropical cyclone, local and state 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 storm. After it 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 response when local and state jurisdictions' resources are overwhelmed and they request Federal public health and medical support in preparation and response to a tropical cyclone. 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 tropical cyclone, 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 tropical cyclone, private sector resources beyond those provided by existing government contracts may need to be identified. The affected population will require items including bottled water, ready-to-eat 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., bulk water distribution). Federal requests for private-sector resources also require de-confliction with local and state government contracts so that resources are not double-counted or incorrectly adjudicated.
Situational Assessment	Accurate and timely information from situational assessments must be available to allow for an effective response. A tropical cyclone 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. 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.
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. Due to the size of the impacted area, the timeline for restoration of essential infrastructure will be unknown until the severity of the damage is determined. 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 tropical cyclone 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 New Jersey and New York area of FEMA Region 2. Background information contained is based on data obtained from the following work efforts:

- New Jersey Technical Data Report, USACE, September 2010
- New Jersey State Hurricane Incident Annex 2012, New Jersey Office of Emergency Management
- New York State Hurricane Evacuation Study, Technical Data Report , USACE, April 2009 (with revisions in August 2009)
- Metro New York Evacuation Project, Technical Data Report, USACE, September 2011
- National Oceanic and Atmospheric Administration, Coastal Services Center
- The City of New York Hazard Mitigation Plan, March 2009, New York City Office of Emergency Management
- Suffolk County Hazard Mitigation Plan October 2008, Suffolk County Department of Emergency Services
- Multi-Jurisdictional Hazard Mitigation Plan – Nassau County, New York February 2007, Nassau County Office of Emergency Management
- State of New Jersey Hazard Mitigation Plan April 2011, New Jersey State Office of Emergency Management

The coastal areas of New York and New Jersey are vulnerable to the threat of hurricanes and other tropical cyclones. This is due to their location in the West Atlantic Tropical Basin in concert with the Bermuda High, low lying coastal areas, and the location of large and densely concentrated population centers in these coastal areas.

Intensifying the area's vulnerability is a complicated offshore continental shelf configuration caused by the right angle formation of the New Jersey and New York Atlantic Coast, referred to as the New York Bight. This creates a geographic "funnel" in regards to water coming in from

the Atlantic Ocean. This, in combination with the shallow bathymetry and irregular shapes of bays in the New York City region causing extremely complicated tidal timing patterns, sets up the possibility for very large and potentially catastrophic storm surges.

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. Since the highest threat scenario (i.e., a Category 5 storm) cannot be meteorologically supported north of Virginia, there are just four distinct hurricane categories for New York and New Jersey. These are based on the categories of the Saffir-Simpson Hurricane Wind Scale and potential storm surge threats that are developed using NOAA's Sea, Lake, and Overland Surge from Hurricanes (SLOSH) numerical model. The meteorological parameters modeled that affect the storm surge heights include the hurricane'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 storm events with a 1% and .2% chance of occurring in any given year as defined by published National Flood Insurance Rate Studies.

Below are maps of the surge flooding risk to the states of New York and New Jersey (Figures A1-1 and 2). They are based on the results of the SLOSH model simulating the characteristics of many potential hurricanes of differing strength, forward speed, size and direction (angle of approach) that could affect each State. The areal extent is based on the maximum surge value for a defined hurricane on the Saffir-Simpson Scale. The mapping is based on the maximum of maximum storm surge flooding risk (MOMs). For additional explanation of MOMs, see Tab 2 to Appendix 1: Situational Awareness.

Figure A1-1: Map of Surge Zones – New York

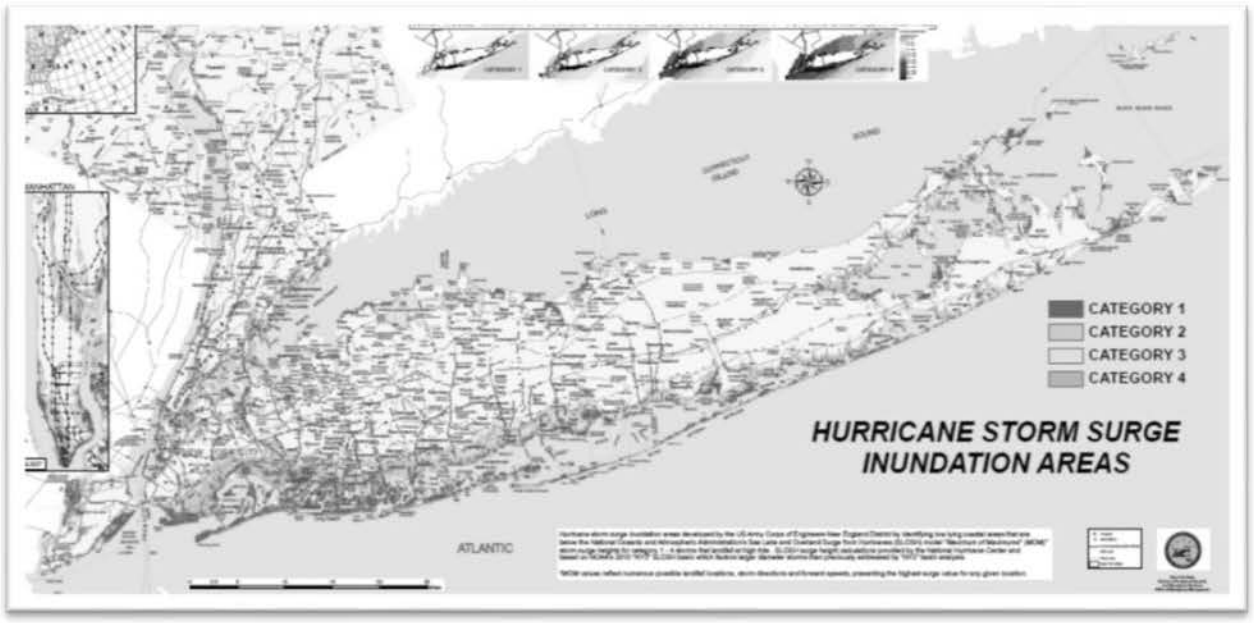
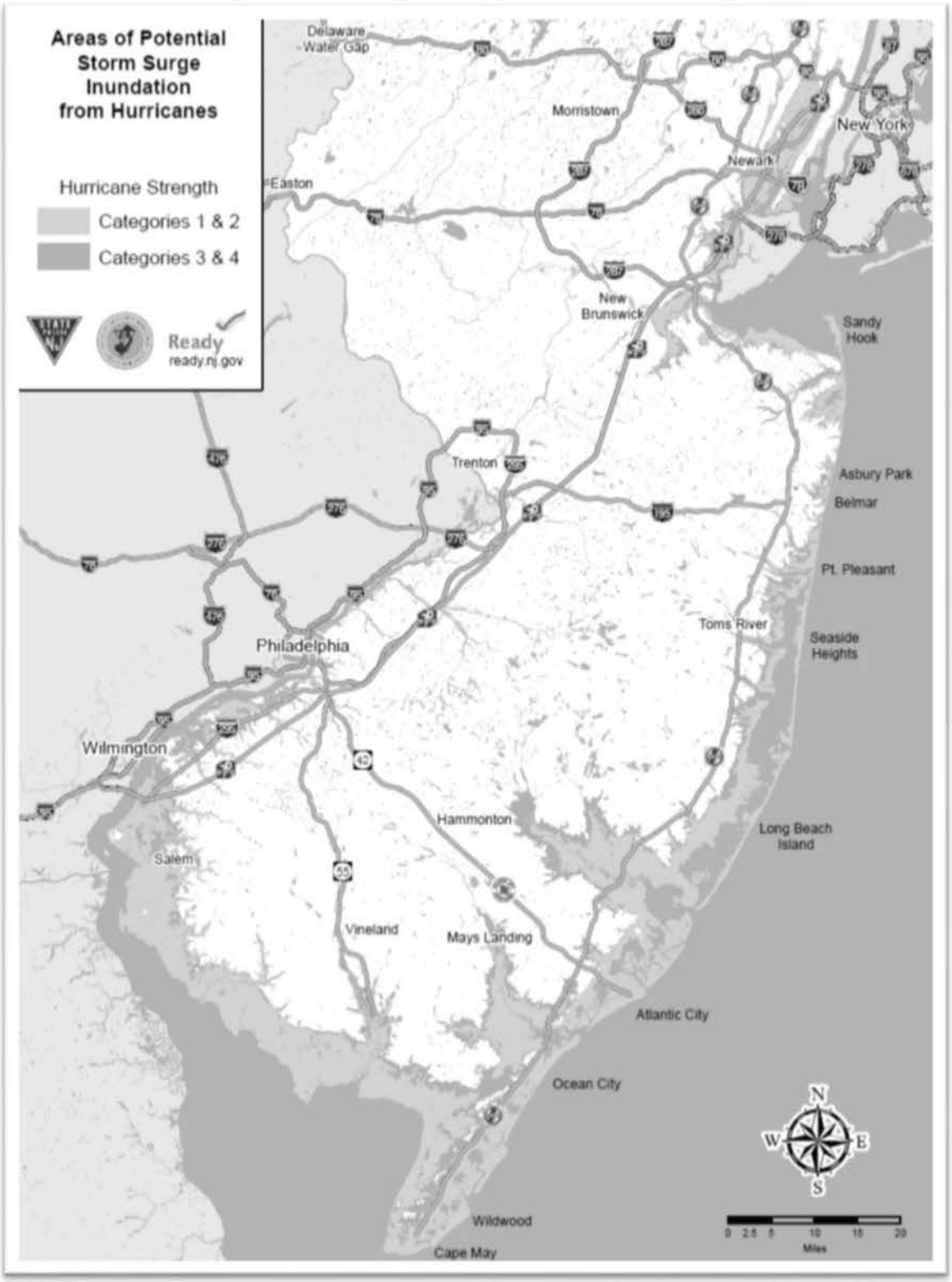


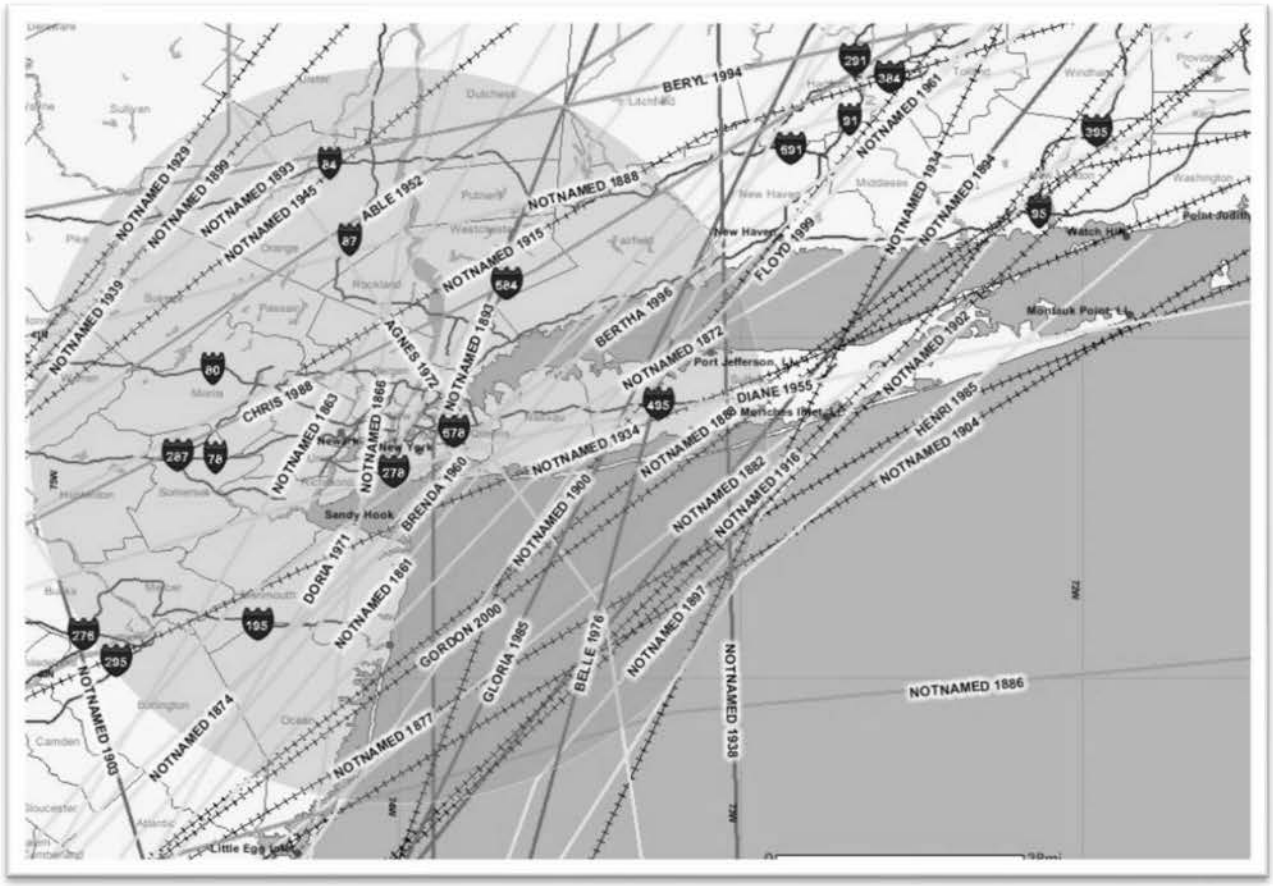
Figure A1-2: Map of Surge Zones – New Jersey



For detailed versions of these maps, contact the Geographic Information Unit of the Situational Awareness Section of the RRCC.

Both States have a surprisingly active tropical storm and hurricane history. Numerous hurricanes have passed near or through the states as shown in the following map.

Figure A1-3: Historical Hurricane Tracks Affecting New Jersey / New York 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)

The following table lists the number of recorded storms affecting New Jersey and New York according to the month they occurred. The most storms occur in August and September.

Table A1-3: Number of Recorded Storms Affecting New Jersey and New York, By Month

Month	New Jersey	New York
June	7	4
July	7	7
August	31	23
September	41	37
October	14	14
November	0	1

Table A1-4 displays the housing and population in the New Jersey and New York coastal communities that are exposed to hurricane hazards prior to the 2011 Hurricane Season.

Table A1-4: NJ and NY Population and Housing Data at Risk to Hurricanes

Jurisdiction	Permanent Population	Permanent Occupied Housing Units	Mobile Home Units	Seasonal Tourist Units
Salem County	*62,768*	*24,189*	*1,069*	*48*
Cumberland County	*129,935*	*47,618*	*2,815*	*918*
Cape May County	*99,673*	*42,155*	*1,430*	*60,078*
Atlantic County	*242,207*	*93,669*	*2,757*	*12,111*
Ocean County	*498,132*	*198,221*	*4,743*	*35,626*
Monmouth County	*595,113*	*220,552*	*2,930*	*8,137*
Middlesex County	*726,859*	*264,936*	*2,343*	*1,134*
Union County	*474,708*	*171,808*	*234*	*518*
Essex County	*743,870*	*273,816*	*216*	*778*
Hudson County	*599,815*	*230,551*	*327*	*970*
New Jersey Totals	***4,173,080***	***1,567,515***	***18,864***	***120,318***
New York City				
Manhattan	*1,537,228*	*738,642*	*239*	*82,611*
Brooklyn	*2,465,327*	*880,727*	*637*	*3,892*
Queens	*2,229,379*	*782,664*	*632*	*10,770*
Staten Island	*443,728*	*156,341*	*278*	*1,120*
Bronx	*1,332,228*	*463,212*	*333*	*962*
Nassau	*1,334,549*	*447,387*	*418*	*8,000*
Suffolk	*1,419,370*	*469,299*	*5,374*	*46,770*
Westchester	*923,460*	*337,142*	*152*	*8,386*
New York Totals	***11,685,269***	***4,275,414***	***8,063***	***162,511***
Totals-	***16,020,860***	***5,842,929***	***26,927***	***282,829***

(Sources: New Jersey Technical Data Report, USACE, September 2010; and New York State Hurricane Evacuation Study, Technical Data Report , USACE, 2009)

The significantly large population at risk and limited evacuation routes from barrier islands creates long evacuation times. The following tables (A1-5 and 6) display the evacuation clearance time estimates for New Jersey and New York counties vulnerable to storm surge flooding. Evacuation clearance times estimate the time from when the first evacuating vehicle enters the road network to the time when the last vehicle reaches an assumed point of safety for a specific evacuation zone.

Evacuation modeling considers the storm intensity (e.g., Category 1, 2, 3, or 4), specific behavioral assumptions, response rates of the evacuating population and tourist occupancy. Ultimately for worst-case planning, clearance times typically consider 100% evacuation compliance. The New Jersey Table A1-5 accounts for the public response time (rapid or long), while the New York Table A1-6 addresses background traffic levels (light or heavy).

Table A1-5: Evacuation Time Estimates (in hours to complete) – State of New Jersey

	Category	Low Seasonal Occupancy		High Seasonal Occupancy	
		South Atlantic Counties			
		Rapid Response	Long Response	Rapid Response	Long Response
	Southeast Coastal Counties				
Cape May	Cat 1	9.0	12.5	24.8	28.3
	Cat 2	15.6	19.1	29.3	32.8
	Cat 3	20.6	24.1	35.0	28.5
	Cat 4	26.1	29.6	40.5	44.0
Atlantic	Cat 1	9.0	12.5	24.8	28.3
	Cat 2	15.6	19.1	29.3	32.8
	Cat 3	20.6	24.1	35.0	28.5
	Cat 4	26.1	29.6	40.5	44.0
Ocean	Cat 1	9.0	12.5	24.8	28.3
	Cat 2	15.6	19.1	29.3	32.8
	Cat 3	20.6	24.1	35.0	28.5
	Cat 4	26.1	29.6	40.5	44.0
Monmouth	Cat 1	5.6	9.1	15.7	19.2
	Cat 2	8.3	11.8	18.6	22.1
	Cat 3	11.6	15.1	22.5	26.0
	Cat 4	15.5	19.0	26.4	29.9
	Southwest Counties				
Burlington	Cat 1	4.0	7.5	13.5	17.0
	Cat 2	5.6	9.1	15.6	19.1
	Cat 3	7.9	11.4	18.5	22.0
	Cat 4	10.4	13.9	21.0	24.5
Camden	Cat 1	3.1	6.6	7.3	10.8
	Cat 2	4.0	7.5	7.6	11.1
	Cat 3	4.9	8.4	8.7	12.2
	Cat 4	6.1	9.6	9.9	13.4
Gloucester	Cat 1	3.2	6.7	7.9	11.4
	Cat 2	4.1	7.6	9.3	12.8
	Cat 3	5.1	8.6	10.5	14.0
	Cat 4	6.4	9.9	11.9	15.4
Salem	Cat 1	2.8	6.3	4.8	8.3
	Cat 2	4.0	7.5	5.7	9.2
	Cat 3	5.6	9.3	7.7	11.2
	Cat 4	8.1	11.6	10.0	13.5
Cumberland	Cat 1	2.8	6.3	4.8	8.3
	Cat 2	4.0	7.5	5.7	9.2
	Cat 3	5.8	9.3	7.7	11.2
	Cat 4	8.1	11.6	10.0	13.5
	Northeast Counties				
Middlesex	Cat 1	3.8	7.3	8.6	12.1
	Cat 2	5.6	9.1	10.4	13.9
	Cat 3	8.0	11.5	13.2	16.7
	Cat 4	11.5	15.0	16.8	20.3
Union	Cat 1	3.8	7.3	8.6	12.1
	Cat 2	5.6	9.1	10.4	13.9
	Cat 3	8.0	11.5	13.2	16.7
	Cat 4	11.5	15.0	16.8	20.3

Essex	Cat 1	3.8	7.3	8.6	12.1
	Cat 2	5.6	9.1	10.4	13.9
	Cat 3	8.0	11.5	13.2	16.7
	Cat 4	11.5	15.0	16.8	20.3
Hudson	Cat 1	3.3	6.8	6.5	10.0
	Cat 2	4.6	8.1	7.9	11.4
	Cat 3	6.6	10.1	10.1	13.6
	Cat 4	9.6	13.1	13.1	16.6
Passaic	Cat 1	3.9	7.4	9.2	12.7
	Cat 2	5.6	9.1	11.0	14.5
	Cat 3	7.9	11.4	13.7	17.2
	Cat 4	11.1	14.6	16.9	20.4
Bergen	Cat 1	3.4	6.9	7.0	10.5
	Cat 2	4.9	8.4	8.6	12.1
	Cat 3	7.2	10.7	11.2	14.7
	Cat 4	10.8	14.3	14.8	18.3

(Source: New Jersey Technical Data Report, USACE, September 2010)

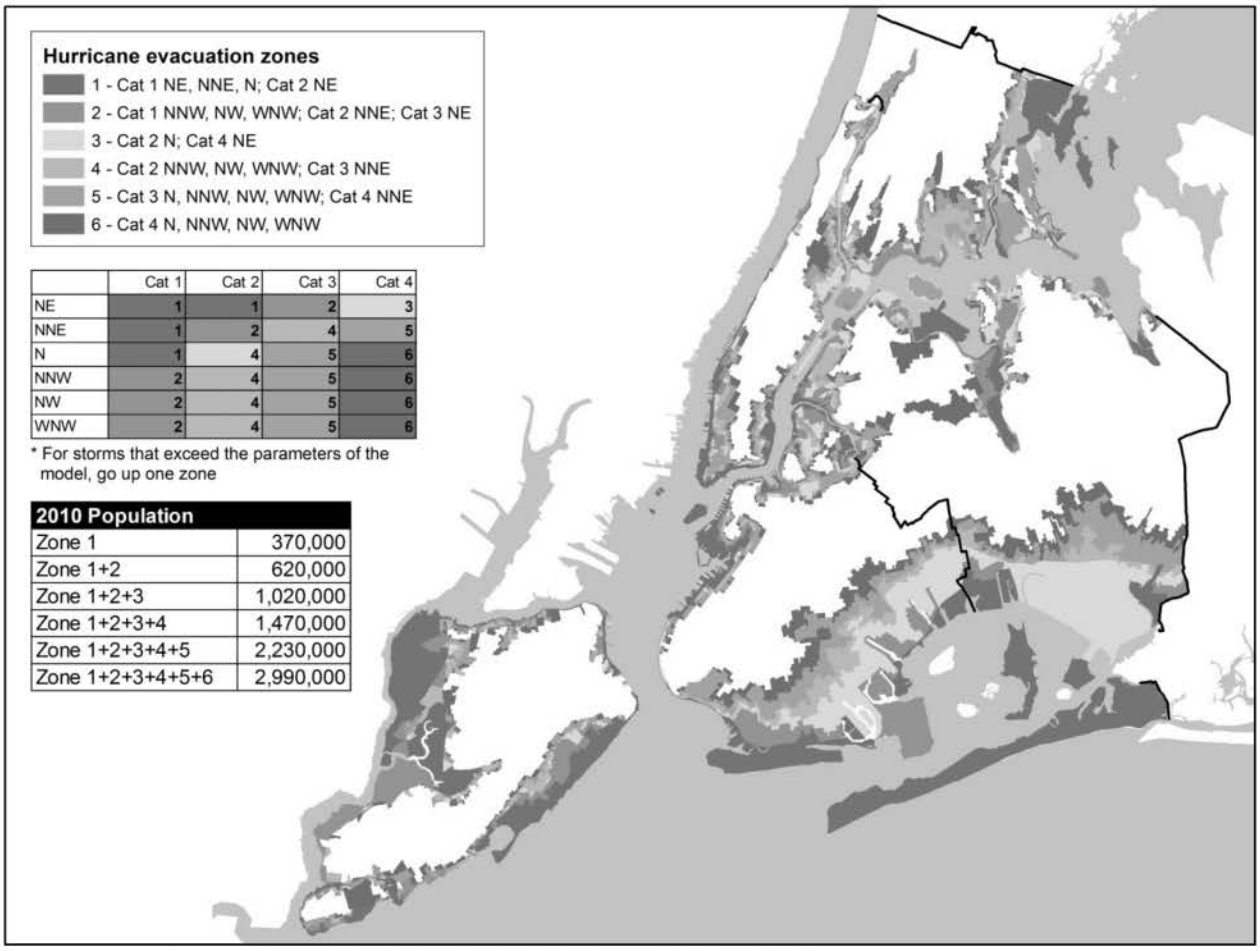
Table A1-6: Evacuation Time Estimates (in hours to complete) – State of New York

	Category/ Evacuation Scenario	Low Seasonal Occupancy		High Seasonal Occupancy	
		Light Background Traffic	Heavy Background Traffic	Light Background Traffic	Heavy Background Traffic *
New York City With Regional Traffic	Scenario 1	10.9	13.9	11.1	14.1
	Scenario 2	12.7	15.7	12.8	15.8
	Scenario 3	13.5	17.1	13.7	17.3
	Scenario 4	13.9	19.9	14.1	20.1
	Scenario 5	14.4	22.1	14.7	22.3
	Scenario 6	15.6	24.4	18.1	24.6
Nassau	Cat 1	10.6	16.6	10.8	16.8
	Cat 2	14.9	20.9	15.1	21.1
	Cat 3	19.5	25.4	19.7	25.6
	Cat 4	21.4	27.3	21.6	27.6
Suffolk	Cat 1	6.9	10.6	10.0	13.8
	Cat 2	9.2	13.0	13.1	16.8
	Cat 3	14.0	17.7	18.1	21.8
	Cat 4	18.0	21.7	22.3	26.0
Westchester	Cat 1	2.5	5.8	2.6	5.8
	Cat 2	2.9	6.1	2.9	6.2
	Cat 3	3.1	6.4	3.2	6.4
	Cat 4	3.2	6.4	3.2	6.5

* Note that for New York City, it is strongly recommended that the times for real-time decision making be based on the yellow highlighted column which reflects significant hotel occupancy and heavy background traffic.
(Sources: Interim Clearance Time Analysis for NYC – July 2013; and New York State Hurricane Evacuation Study, Technical Data Report, USACE, 2009)

The New York City clearance times published in 2013 are for six evacuation scenarios. This is appropriate given the level of urban activity typically present in the area. These evacuation scenarios depend on both the category of the storm and its direction of approach as shown below in Figure A1-4.

Figure A1-4. New York City Hurricane Evacuation Zones



	Cat 1	Cat 2	Cat 3	Cat 4
NE	1	1	2	3
NNE	1	2	4	5
N	1	4	5	6
NNW	2	4	5	6
NW	2	4	5	6
WNW	2	4	5	6

* For storms that exceed the parameters of the model, go up one zone

2010 Population	
Zone 1	370,000
Zone 1+2	620,000
Zone 1+2+3	1,020,000
Zone 1+2+3+4	1,470,000
Zone 1+2+3+4+5	2,230,000
Zone 1+2+3+4+5+6	2,990,000

(Source: courtesy of NYC Office of Emergency Management, January 2014)

Hurricanes in the North Atlantic Coast are historically considered a low probability event. This can be seen in the following table (Table A1-7) identifying the mean return hurricane periods for the North Atlantic area by the identified five hurricane threat scenarios.

Table A1-7: Mean Hurricane Return Periods – North Atlantic Coast

Return Period in Years for Hurricanes		
Category	**Wind Speed**	**Return Period**
1	74-95 mph	17 years
2	96-110 mph	39 years
3	111-129 mph	68 years
4	130-156 mph	150 years
5	> 157 mph	370 years

On the other hand, they are also designated a high consequence event with widespread impacts based on the storm's intensity, size, duration of event, quantity of associated rainfall, 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 surge and freshwater) and wind. Using HAZUS MH, the States of New Jersey and New York have identified the estimated damaged buildings either by the storm events with a 1% and .2% chance of occurring in any given year or by storm surge zone.

The following tables identify the total exposure to potential flood and wind damages for the New Jersey and New York coastal counties.

Table A1-8: Estimated Annual Damages in New Jersey for 1% Floods

County	Total Exposure	% A-Zone	A-Zone Exposure	Potential Annual Damages
Atlantic	$27,652,015,000	32.46%	$8,976,933,482	**$89,769,335**
Bergen	$100,653,325,000	20.32%	$20,454,933,398	**$204,549,334**
Burlington	$51,757,042,000	18.77%	$9,714,949,727	**$97,149,497**
Camden	$46,731,673,000	6.80%	$3,177,894,007	**$31,778,940**
Cape May	$18,311,425,000	46.43%	$8,501,530,083	**$85,015,301**
Cumberland	$12,235,912,000	31.56%	$3,861,595,910	**$38,615,959**
Essex	$79,240,485,000	15.89%	$12,591,376,804	**$125,913,768**
Gloucester	$24,721,631,000	16.43%	$4,061,302,346	**$40,613,023**
Hudson	$53,814,871,000	35.59%	$19,153,803,429	**$191,538,034**
Middlesex	$78,836,283,000	13.92%	$10,977,399,938	**$109,773,999**
Monmouth	$67,233,273,000	8.52%	$5,731,103,444	**$57,311,034**
Ocean	$50,946,874,000	25.89%	$13,187,896,960	**$131,878,970**
Passaic	$45,121,076,000	12.55%	$5,664,673,952	**$56,646,740**
Salem	$6,080,176,000	33.18%	$2,017,293,129	**$20,172,931**
Union	$50,021,816,000	6.76%	$3,383,045,455	**$33,830,455**

(Source: State of New Jersey Hazard Mitigation Plan April 2011, New Jersey State Office of Emergency Management)

Table A1-9: Summary of Loss Exposure to Flood and Wind Damages for New Jersey Coastal Counties

County	$Exposure [1000s]	% County A Zone	% County V Zone	NFIP Claims	Hurricane Wind [1000s]
Atlantic	$27,652,015	32.46%	2.40%	8,464	$340,118
Bergen	$100,653,325	25.89%	0.00%	6,304	$259,873
Burlington	$50,946,874	31.56%	0.00%	1,077	$82,894
Camden	$50,021,816	18.77%	0.00%	894	$94,436
Cape May	$18,311,425	46.43%	7.08%	15,599	$347,237
Cumberland	$12,235,912	33.18%	0.00%	644	$11,902
Essex	$78,836,283	13.61%	0.00%	2,646	$200,477
Gloucester	$24,721,631	16.43%	0.00%	299	$47,378
Hudson	$53,814,871	20.32%	0.35%	1,034	$142,528
Middlesex	$79,240,485	7.38%	1.55%	1,782	$843,336
Monmouth	$64,432,550	10.26%	2.09%	7,079	$770,679

Ocean	$46,731,673	10.65%	3.41%	12,765	$753,916
Passaic	$45,121,076	5.19%	0.00%	7,921	$123,498
Salem	$6,080,176	35.59%	0.00%	399	$12,420
Union	$51,757,042	6.80%	0.00%	3,317	$142,355

(Source: State of New Jersey Hazard Mitigation Plan April 2011, New Jersey State Office of Emergency Management)

A similar pattern is seen along the low-lying areas of Long Island and New York City's Boroughs. The following tables from selected communities illustrate the potential building damage and loss exposure to hurricanes.

Table A1-10: Nassau County Estimated Assets Exposed to Storm Surge

Summary of Assets Exposed to Storm Surge					
	Total, Countywide	Category 1	Category 2	Category 3	Category 4
Number of Parcels	416,419	29,827	81,311	105,437	133,717
Percent of Land	--	14.87%	20.70%	24.37%	27.44%
Assessed Value of Improved Property	$752,965,224	$58,316,356	$131,639,824	$174,923,325	$217,203,062
Percent of Improved Property (by assessed value)	--	7.74%	17.48%	23.23%	28.85%
Number of Emergency Facilities	602	31	104	166	222
Number of Utilities	37	9	15	18	20
Number of Historic and Cultural Resources	165	9	24	30	35

(Source: Multi-Jurisdictional Hazard Mitigation Plan – Nassau County, New York February 2007, Nassau County Office of Emergency Management)

Table A1-11: Suffolk County Estimated Building Damages and Exposure Loss
(HAZUS MH, 2005)

Occupancy Class	Severity of Expected Building Damage	100-year		500-year	
		Building Count	Percent of Buildings in Occupancy Class	Building Count	Percent of Buildings in Occupancy Class
Residential Exposure (Single and Multi-Family Dwellings)	None	371,721	79.1	162,329	34.5
	Minor	80,278	17.1	173,449	36.9
	Moderate	15,275	3.3	88,637	18.9
	Severe	1,419	0.3	24,550	5.2
	Complete Destruction	1,340	0.3	21,067	4.5
Commercial Buildings	None	8,831	84.1	3,724	35.5
	Minor	1,168	11.1	2,684	25.6
	Moderate	420	4.0	2,674	25.5
	Severe	80	0.8	1,401	13.3
	Complete Destruction	1	0	18	0.2

Industrial Buildings	None	2,179	84.9	895	34.9
	Minor	274	10.7	597	23.2
	Moderate	92	3.6	660	25.7
	Severe	21	0.8	390	15.2
	Complete Destruction	1	0	26	1.0

(Source: Suffolk County Hazard Mitigation Plan October 2008, Suffolk County Department of Emergency Services, Table 5-30)

Table A1-12: New York City Annualized Capital Stock Loss for Hurricanes
(HAZUS MH estimates in 1000's of dollars)

County	Building Damage	Contents Damage	Inventory Loss	Total
Brooklyn	58,862	12,143	439	**71,444**
Bronx	32,284	6,940	199	**39,423**
Manhattan	70,276	14,476	125	**84,877**
Queens	53,880	12,217	315	**66,412**
Staten Island	10,914	3,148	30	**14,092**
Total	**226,216**	**48,924**	**1,108**	**276,248**

(Source: The City of New York Hazard Mitigation Plan, March 2009, New York City Office of Emergency Management)

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 tropical cyclone event. The following tables identify such facilities in New Jersey and New York.

Table A1-13: New Jersey Critical Facilities in the Flood Zone

Facility Type	A Zone	V or VE Zone	X Zone	X500 Zone	ANI/na	Total
Police Stations	6	1	503	15	76	601
Fire Stations	8	1	630	23	80	742
EOCs	2	0	117	9	2	130
Health Care	3	0	84	2	10	99
Hazmat Sites	35	0	1,502	106	539	2,182
Total	**54**	**2**	**2,856**	**155**	**707**	**3,754**

Table A1-14: New York City Critical Facilities within the Category 4 SLOSH Zone

Critical Assets Located within SLOSH Zones	
Critical Asset	**#**
Subway Stations	119
Rail Stations	30
Bridges and Tunnels	31
Major Roads (miles)	461
Airports	2

Ferry Landings	25
Emergency Services – Police Stations	22
Emergency Services – Fire Stations	56
Emergency Services – EMS Stations	10
Educational – Colleges	19
Educational – Public Schools	343
Educational – Private Schools	215
Healthcare – Hospitals	23
Healthcare – Nursing Homes	57
Cultural Facilities	11
Infrastructure – Power Plants	17
Infrastructure – Wastewater Treatment Plants	13

(Source: The City of New York Hazard Mitigation Plan, March 2009, New York City Office of Emergency Management)

A major or catastrophic hurricane (category 3 or higher) could impact up to 21 million residents or almost two-thirds of the population located in Region II. The impacts/effects could disrupt transportation across bridges connecting New Jersey and New York and cause flooding in the New York subway system, disrupting transportation for up to five million daily riders. The large tourist populations in New York and New Jersey may also require additional mass care if they were stranded in the area right before the storm struck. At best, the region would suffer economic losses from tourists or seasonal visitors not being able to complete their vacation plans.

Recovery from the aftermath of a tropical cyclone 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

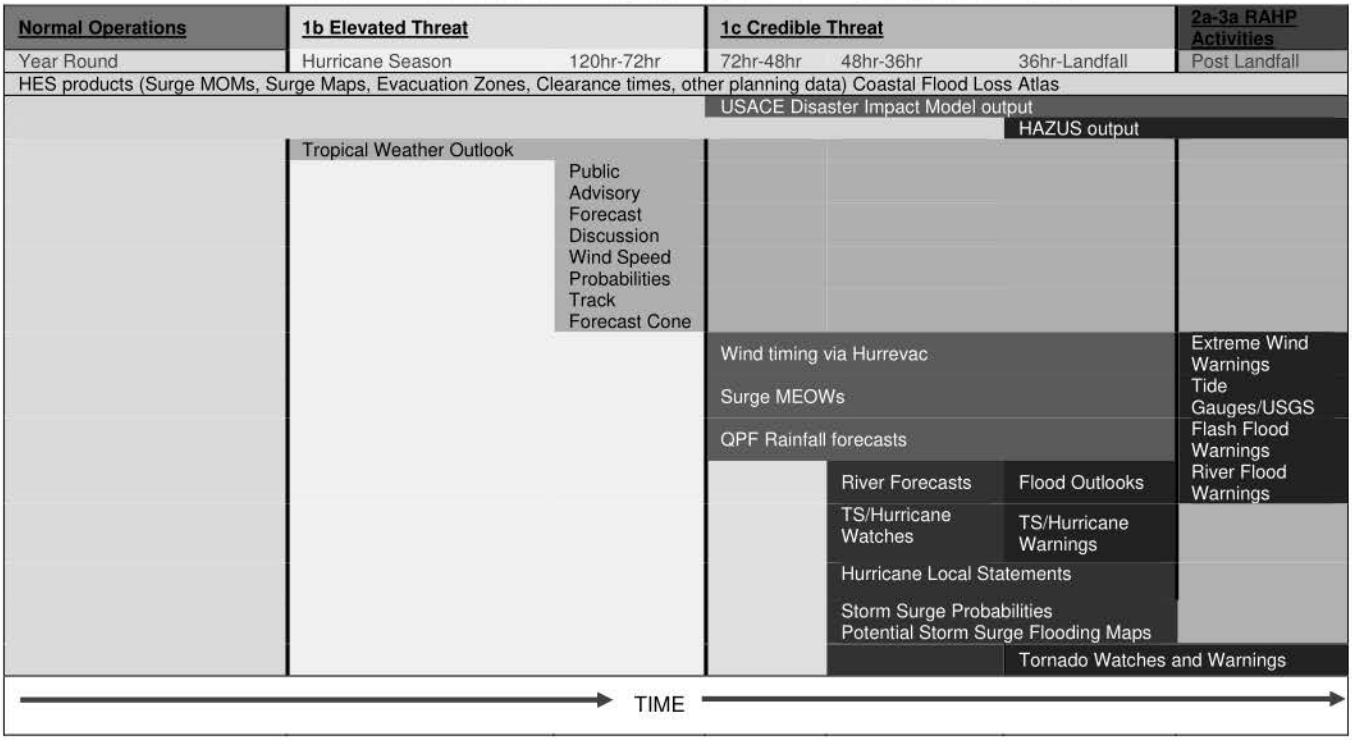
Critical Information Requirements and Essential Elements of Information may be found in the Base Plan within the Region II All Hazards Plan. However, tropical cyclones themselves present a unique list of information products produced by the National Hurricane Center and other stakeholders.

All Hazards Plan Objective: Begin situational assessment within two hours and establish a COP with all affected jurisdictions within 12 hours.

Revised Hurricane 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, Incident Action Plans, Crisis Action Plans etc.).

The following graphic (Table A1-15) shows tropical cyclone products and tools according to when they are developed or used. 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 Service. Note that the table shows the phases during which these products and tools are used. The remainder of this section indicates potential actions during these phases and the entities responsible for performing them.

Table A1-15: Federal Tropical Cyclone Products and Tools



Hurricane Evacuation Study Products

SLOSH MOMs/Surge Maps: After the MOMs (Maximum of MEOWs or Maximum of Maximums) are produced, they are then taken and mapped over a topographic map to produce the surge atlas. Atlases depict the areas that are within the MOM inundation for each category of storm. The Hurricane Evacuation Studies (HES) provides each county with a series of detailed MOM storm surge maps.

Evacuation Zones: Designed to identify high risk areas, based on MOMS and modified to fit state and local decision makers' preferences, 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 for a specific evacuation zone. 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 shelter availability.

Planning Data: Vulnerability, shelter, and population data are 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 county-by-county HAZUS loss estimates based on SLOSH MOMs. (Only Categories 1-4 are meteorologically supported for New York and New Jersey.)

National Hurricane Center Products

Tropical Weather Outlook: is a text discussion of significant areas of disturbed weather and their potential probability for development out to 48 hours and to five days. 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.

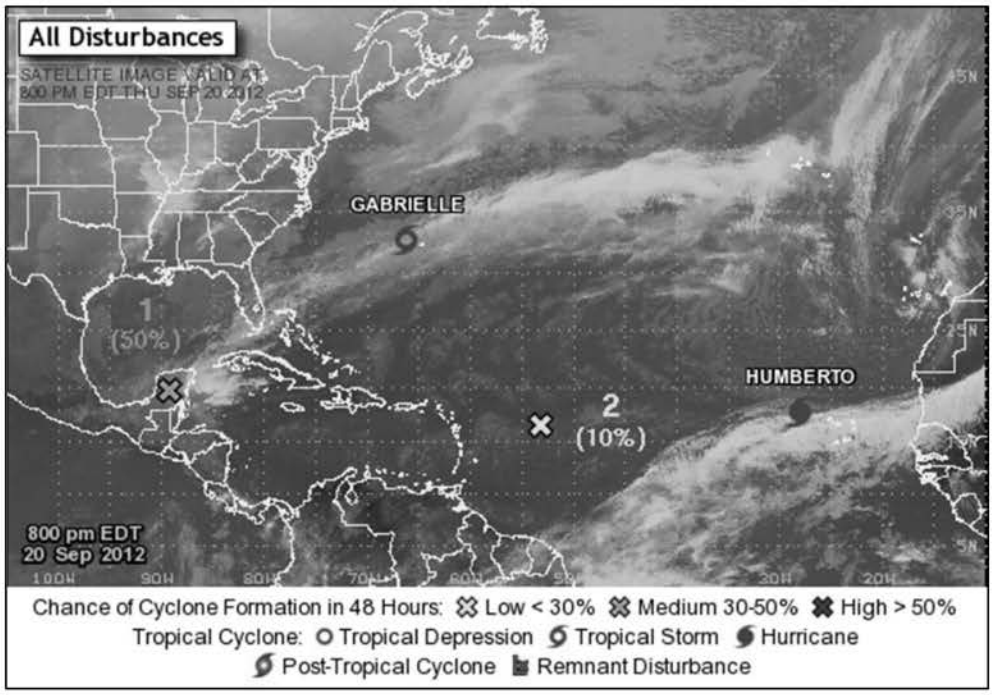
The NHC issues Special Tropical Weather Outlooks when important changes with areas of disturbed weather need to be conveyed before the next scheduled release of the Tropical Weather Outlook (TWO). The Special TWO can also be used on a recurring basis for disturbances outside of the normal hurricane season 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 A1-16 . 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 for the 120-hour or five-day forecast period.

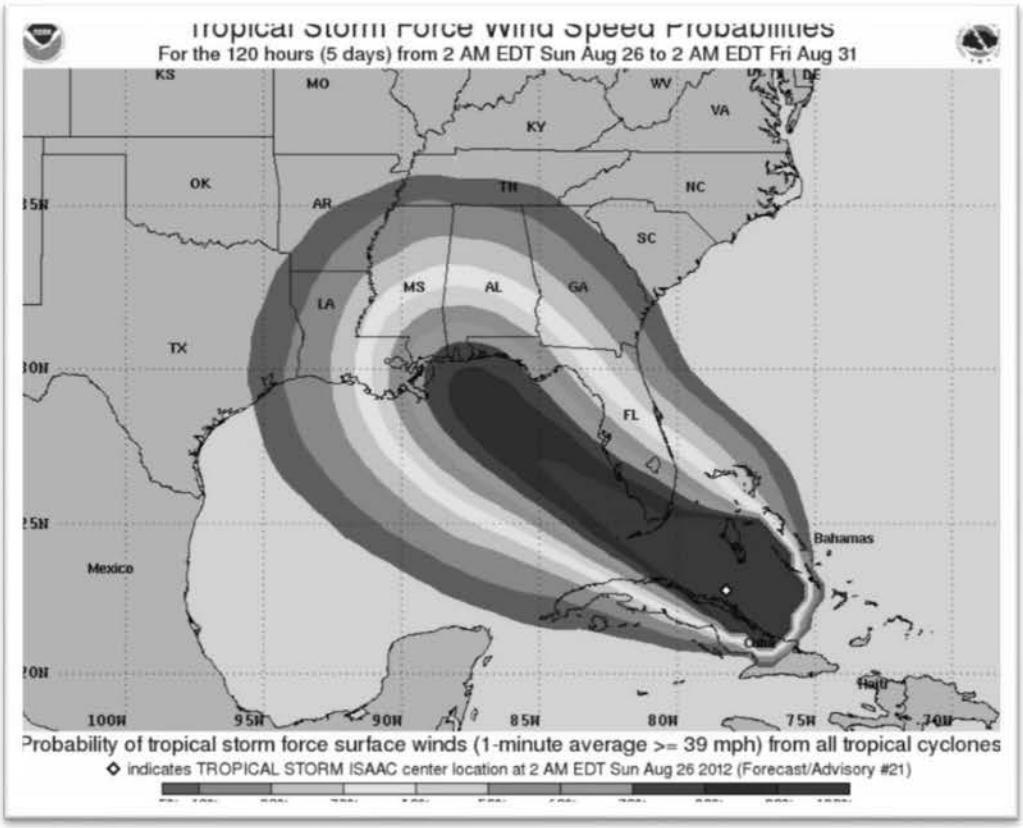
Individual – These values tell you the probability the event will start sometime during the specified individual forecast period (0 - 6 hours, 6-12, 12-18, etc.) at each specific point. These periods are individual, since nothing that occurs before or after the specified period affects the probability. 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. (Figure A1-17)

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 A1-17. 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. (Figure A1-18)

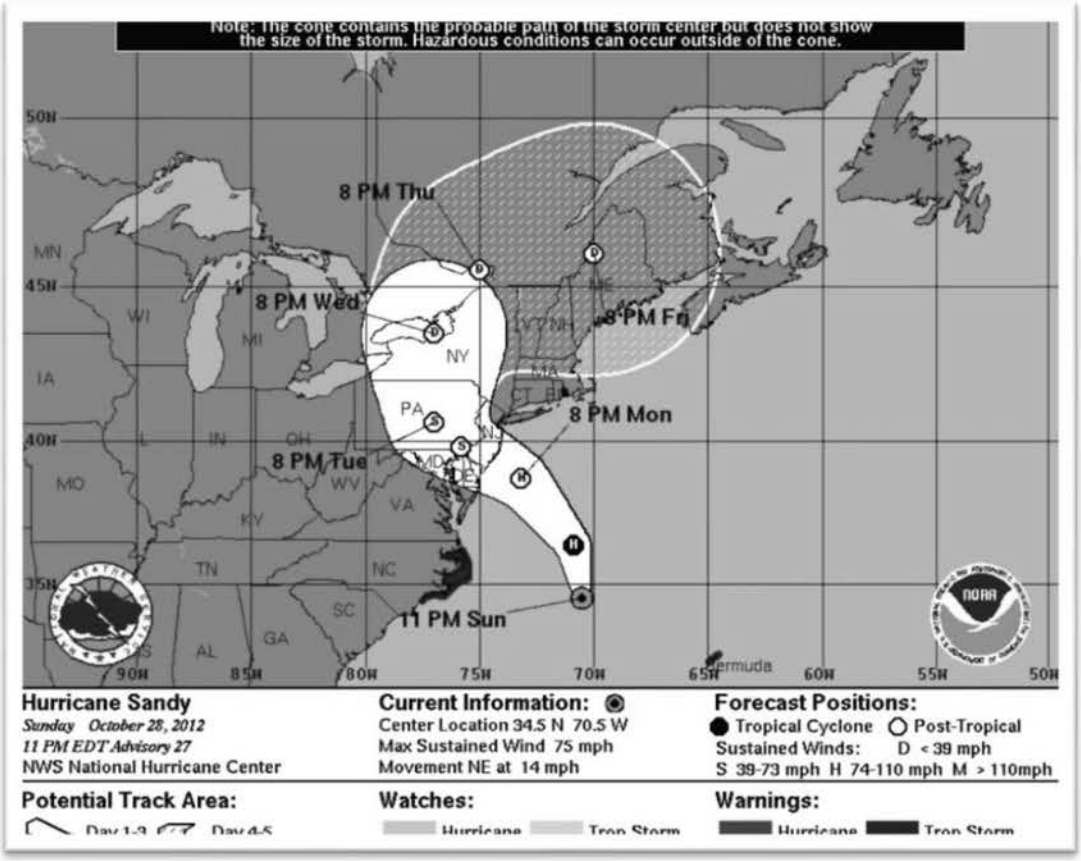
NHC tropical cyclone forecast tracks can be in error. This forecast uncertainty is conveyed by the track forecast "cone", the solid white and stippled white areas in the graphic. The solid white area depicts the track forecast uncertainty for days 1-3 of the forecast, while the stippled area

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 hour 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 A1-18. 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 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. A tropical storm warning is shown in Figure Al-18.

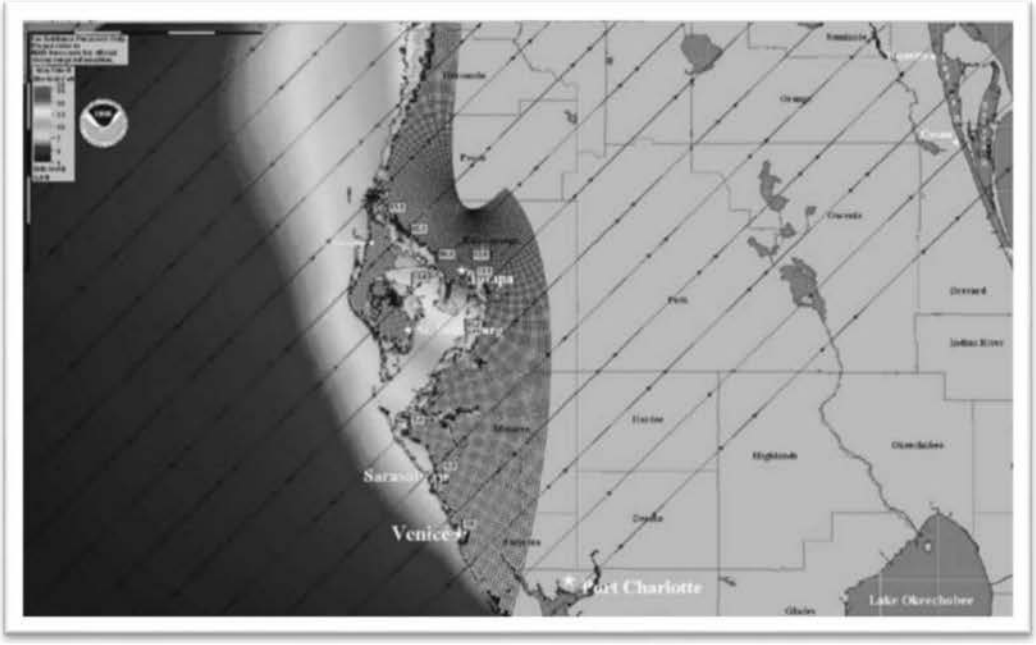
Hurricane Warning: An announcement that sustained winds of 64 knots (74 mph or 119 km/hr) or higher are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because preparedness activities become difficult once winds reach tropical storm 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): provides a worst cast snapshot for a particular storm category under "perfect" storm conditions. Each MOM considers combinations of forward speed, trajectory, and initial tide level. These products are compiled when a SLOSH basin is developed or updated. As with MEOWs, MOMs are not storm specific. No single hurricane will produce the regional flooding depicted in the MOMs. Instead, the product is intended to capture the worst case high water value at a particular location for evacuation planning. The MOMs are also used to develop the nation's evacuation zones. These products can be accessed via the SLOSH Display Program and/or HURREVAC software. Sample graphics from the SLOSH Display Program are shown in Figures A1-19 and 20.

Figure A1-19. Storm Surge Maximum of Maximums (MOM) Graphic

The Maximum Envelope of Water (MEOW) provides a worst case basin snapshot for a particular storm category, forward speed, trajectory, and initial tide level, incorporating uncertainty in forecast landfall location. These products are compiled when a SLOSH basin is developed or updated. MEOWs are not storm specific and are available to view in the SLOSH display program for all operational basins. No single hurricane will produce the regional flooding depicted in the MEOWs. Instead, the product is intended to capture the worst case high water value at a particular location for evacuation planning.

Figure A1-20. Storm Surge Maximum Envelope of Water (MEOW) Graphic



MOMs and MEOWs are available to view in the SLOSH display program (SDP) for all operational basins.

Storm Surge Probabilities (P-surge 2.0):

The Tropical Cyclone Storm Surge Probabilities graphics show the overall chances that the specified storm surge height will occur at each individual location on the map during the forecast period indicated. The storm surge height values are for above ground and they include real-time tide information.

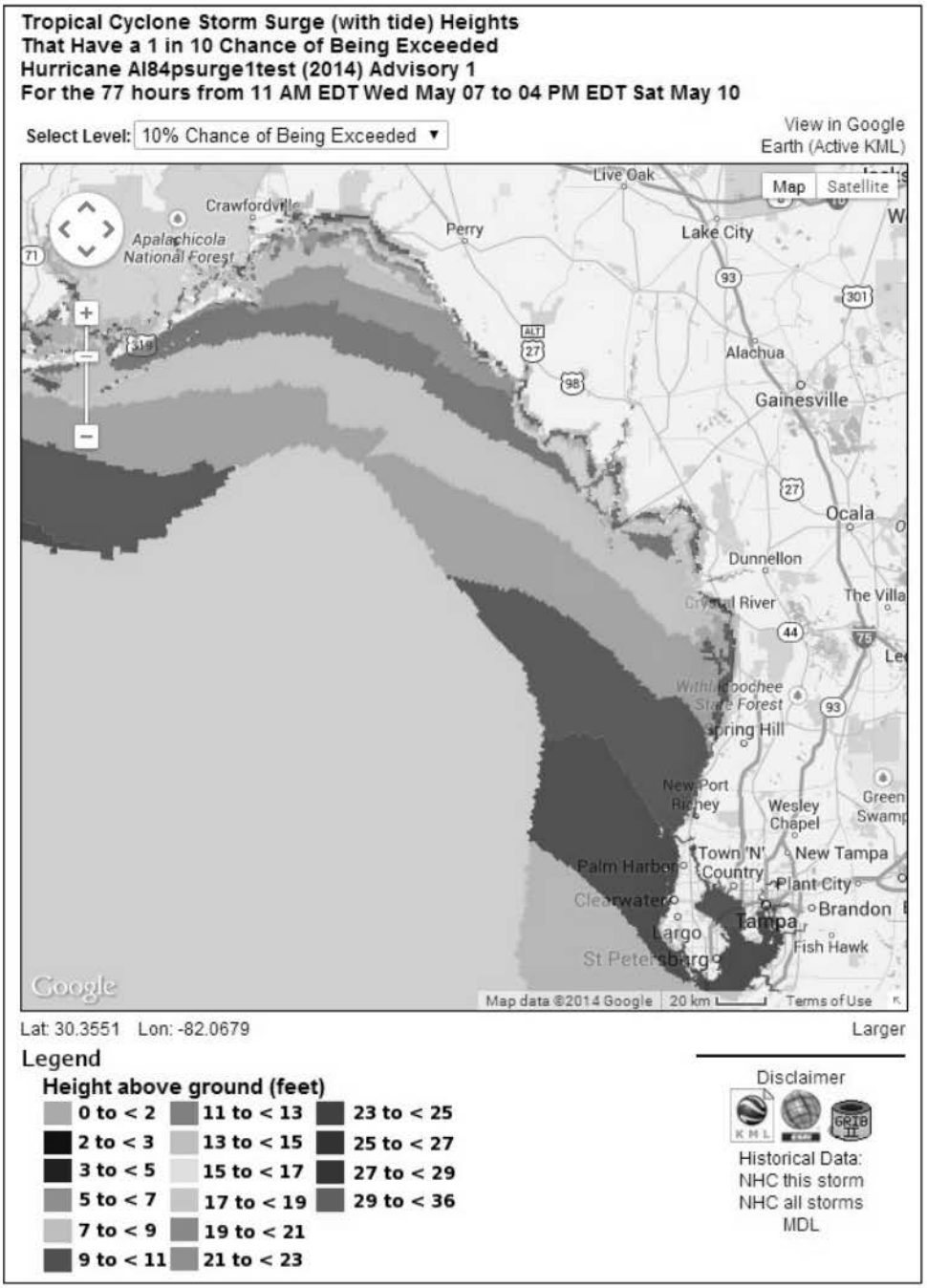
The calculation of the Tropical Cyclone Storm Surge Probabilities is accomplished by statistically evaluating a large set of SLOSH model runs based on the current NHC official forecast, and taking into account historical errors in official NHC track and intensity forecasts. The result is a map of cumulative storm surge probabilities that indicate the overall chances that the indicated storm surge will occur at each location on the map during the period between hour 0 (the beginning of the forecast) and 3 days (72 hours) after the beginning of the forecast.

It is important for users to realize that probabilities that may seem relatively small may still be quite significant. The probabilities might indicate there is a chance that a damaging or even an extreme event could occur at your location. As a storm gets closer to land, relatively small probabilities may warrant making preparations to protect lives and property. Users are urged to consider the potentially immense cost (in terms of lives, property, etc.) of not preparing for an extreme event, even if the chances at an individual point are only perhaps 1 in 20 (5%) or 1 in 10 (10%) that the event will occur.

The NHC will produce a set of updated storm surge probability graphics whenever a hurricane watch or hurricane warning is in effect for any portion of the Gulf or Atlantic coasts of the continental United States. This will be roughly 48 hours prior to arrival of tropical storm force winds. These graphics will take approximately 30 minutes (perhaps more) to update on the NHC website following the issuance of the NHC tropical cyclone advisories 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). They can be obtained through HURREVAC. Additional information about these graphics can be found at www.nhc.noaa.gov/surge/psurge.php

The sample in Figure A1-21 indicates that during a specified 3-day period, storm surge heights (including tides) that have a 1 in 10 chance of being exceeded. For example, the coastal land mapped in navy blue have 1 in 10 chance of being more than 2 to 3 feet above ground level.

Figure A1-21. Storm Surge Heights with a 10% Chance of Being Exceeded



The sample in Figure A1-22 shows the probabilities of storm surge greater than or equal to 2 feet during a specified 3-day period for the individual locations on the map. For example, the coastal lands mapped in yellow have a 30 to 40% chance of being greater than 2 feet above ground level.

Figure A1-22. Storm Surge Probabilities Greater than 2 Feet

Potential Storm Surge Flooding Map: This map is an experimental National Weather Service product that provides valuable new information on the potential storm surge flooding associated with tropical cyclones. The NHC will experimentally issue this map in 2014 to show the extent and depth of possible storm surge flooding for a given storm. For sample graphics, see Figures A1-23 and 24 below.

The map will typically be issued when a hurricane or tropical storm watch is first issued for any portion of the Gulf or East Coast of the United States, or approximately 48 hours before the anticipated onset of tropical storm force winds. It will be updated every six hours in association with each NHC full advisory package.

The map shows:

- Land areas where, based on the latest NHC forecast, storm surge could occur, and
- How high above ground the water could reach in those areas.

Figure A1-23. Potential Storm Surge Flooding Map

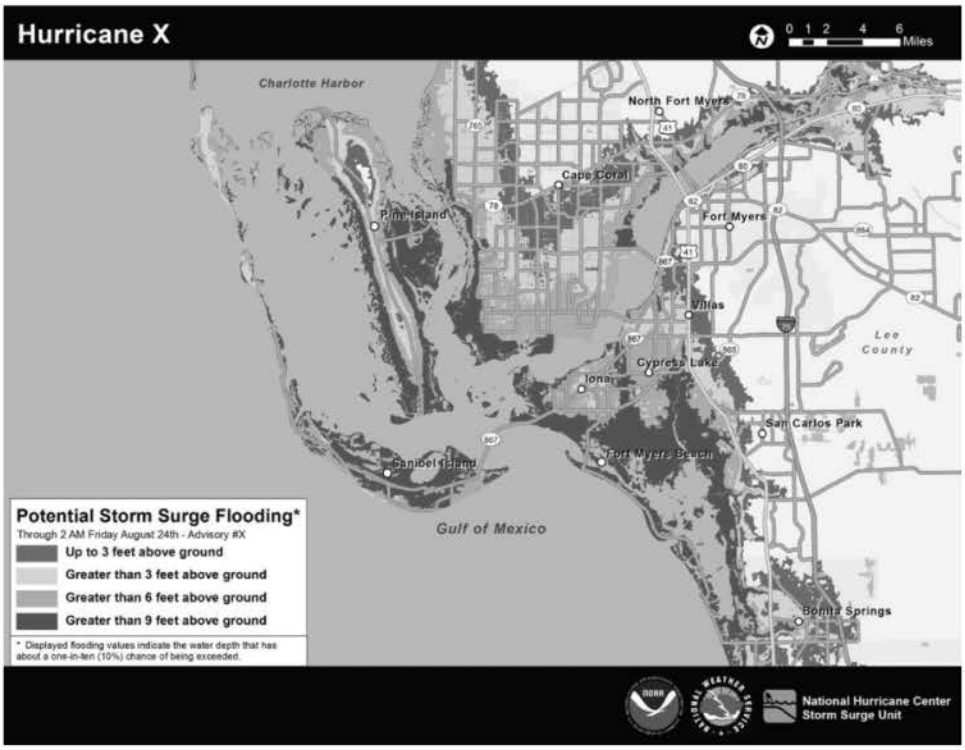
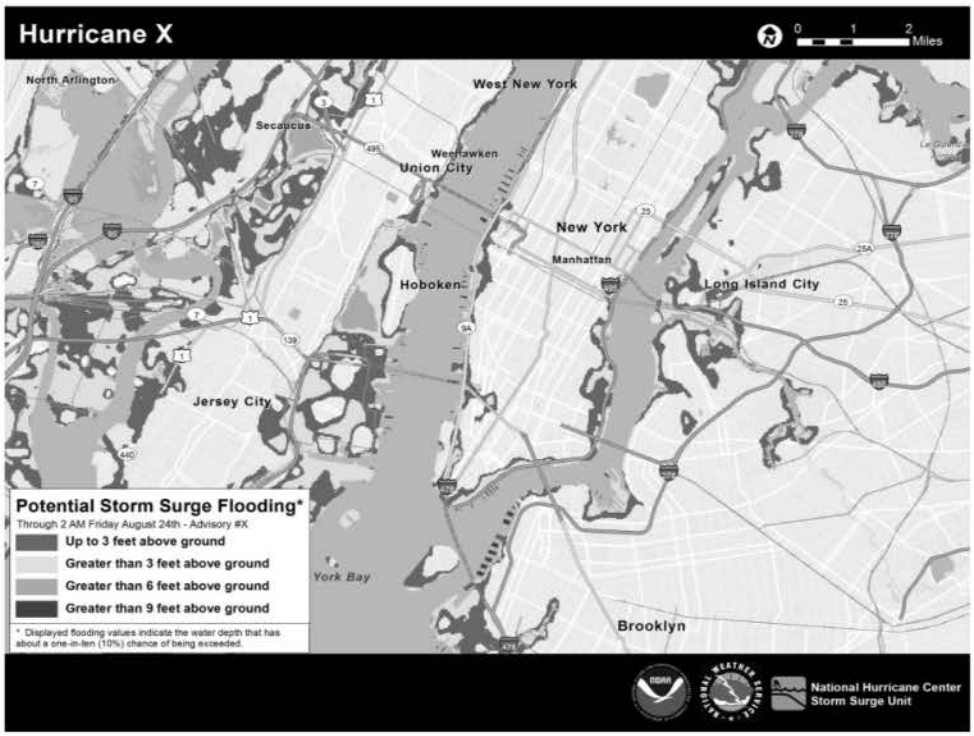


Figure A1-24. Potential Storm Surge Flooding Map, New York City



It represents a reasonable estimate of worst-case scenario flooding of normally dry land at particular locations due to storm surge. There is a 1-in-10 chance that the storm surge flooding at any particular location could be higher than the values shown on the map. The map is created from multiple runs of the SLOSH model.

It takes into account flooding due to storm surge from the ocean, including adjoining tidal rivers, sounds, and bays; as well as tides, land elevation and uncertainties in the track, landfall location, intensity, and size of the cyclone. However, the depicted water levels do not account for wave action, freshwater flooding from rainfall, or flooding inside levees and overtopping. Note that the resolution of this graphic will not allow users to zoom into a specific community or neighborhood and see surge estimates at specific houses.

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.

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 Category 3 or higher hurricane (111 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.

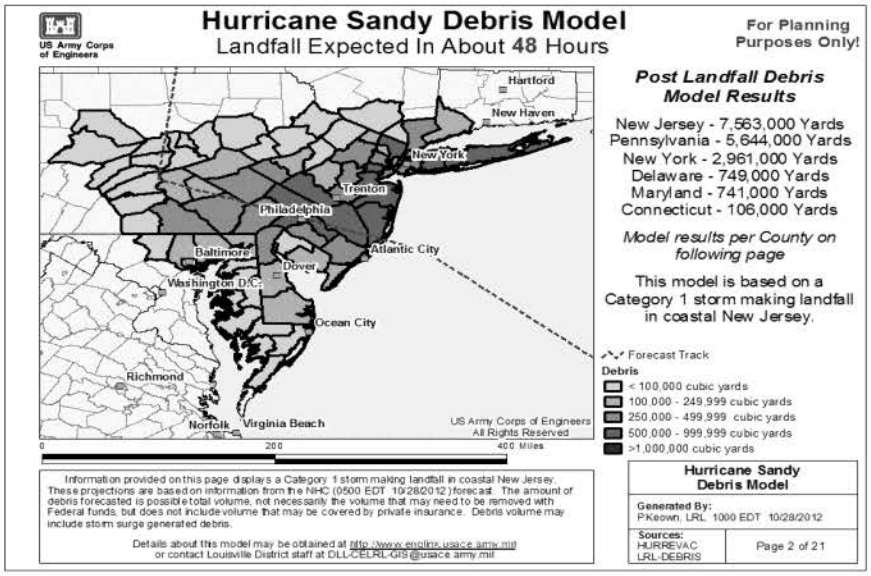
River Flood Warning: is issued when the river stage at a "forecast point" is expected to reach or exceed bankfull (flood stage), causing the inundation of a normally dry area.

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.

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 landfall. Model estimates are developed and posted online at www.englink.usace.army.mil. See Figure A1-25 for sample results for its Debris Model for Hurricane Sandy with landfall expected in about 48 hours.

Figure A1-25. 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 and other tropical cyclones. 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

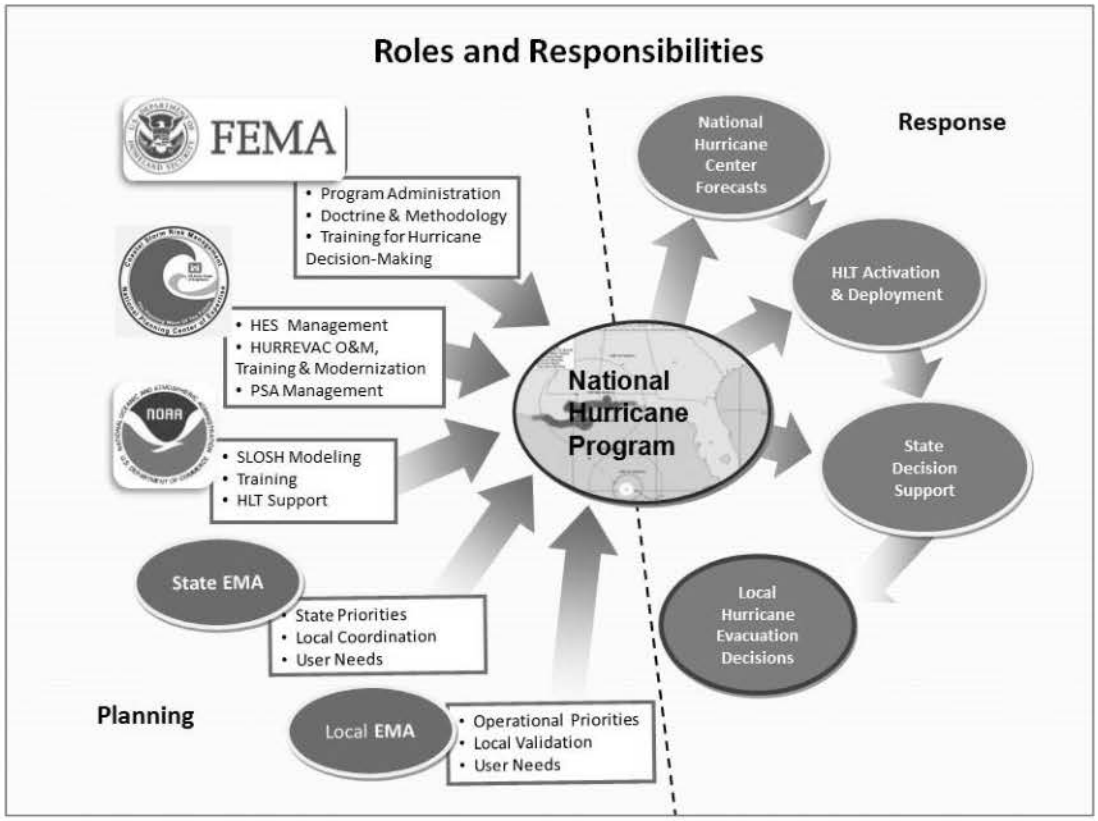
This program provides a critical set of emergency management tools and information to local, state and Federal government agencies to support their decisions in response to the safe evacuation and mass care of the threatened coastal population before the arrival of a tropical cyclone's dangerous storm conditions. The eight components of the National Hurricane Program (NHP) described in Table A1-16 below. The Hurricane Liaison Team (HLT), which is one of these components, provides real-time operational support during the approach of threatening tropical cyclones. The HLT is described in more detail in the following section.

Table A1-16: 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 tropical cyclone.
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 A1-26. 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 hurricanes or other tropical cyclones.

Figure A1-26. 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 and other threatening tropical cyclones. The mission of the HLT is to support 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.

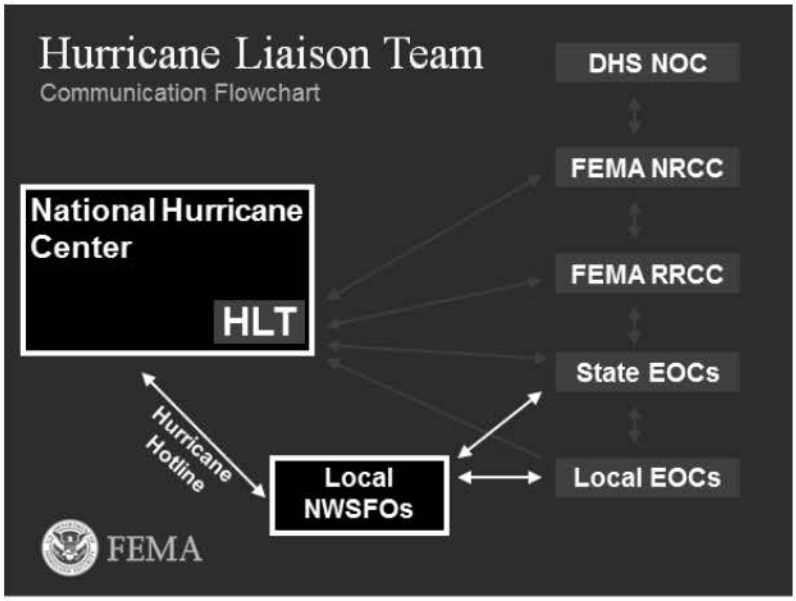
It acts as a liaison between the NWS and state and local emergency managers during the approach of threatening tropical cyclones. It does this to provide early and directly tailored information and guidance to the emergency managers on potential impending evacuation situations.

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 hurricane forecasters, other NWS offices, and the national emergency management community, the HLT interacts and exchanges information with all of the organizations depicted in Figure A1-27 below.

Figure A1-27. 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)
- 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 preform 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:

- *SAS*: 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;
- *SAS*: 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 CIKR data sets);
- *SAS:* Coordinate geographic information system (GIS) based situational assessment data with FEMA divisions to update their needs in all phases of an incident;
- *SAS*: Research and coordinate additional information sources that build portions of the COP; and;
- *SAS:* Provide pre-operational assessments for potential impacts of a hurricane 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

- *SAS:* 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.
- *SAS:* 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.
- *SAS*: 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.
- *SAS*: Capture situational awareness metrics from key private sector partners are captured within 12 hours of RRCC/NRCS activation
- *SAS*: 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.
- *SAS*: 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-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 USACE 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 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, ports, roadways, bridges, tunnels, subway system, 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

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 four hours of the incident.
- 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 Community Relations (CR) 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:*SAS*:
- Continue RRCC Update Reports circulation; and
- 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 response to a tropical cyclone, 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 event.

All Hazards Plan Objective: Within two hours of a no-notice incident, establish Federal operational coordination within the RRCC and transition coordination efforts to field operations when field operations have operational capability.

Revised Hurricane 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.

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, state, local, and tribal coordination structures in response to a hurricane. Notifications including operations orders and Emergency Notification System (ENS) communications are issued as needed.

ESF-5
- *Hurricane Liaison Team*: Notify FEMA leadership of elevated threat of a tropical storm or hurricane.
- Activate the RRCC to the directed level.
- Activate select ESFs.
- Coordinate with the impacted states and all appropriate parties to coordinate and synchronize Federal and state operations.
- *SAS/RSS*: Coordinate with the impacted state(s) to maintain shared situational awareness and understanding on the resourcing and delivery of required resources.
- *Regional Watch Center*: Develop and disseminate orders (e.g. Warning Order and Operations Order).
- 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.
- Evaluate evacuee reception capabilities throughout the impacted area, including individuals with disabilities and those with access and functional needs.

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 the respective state(s) to develop unified response plans.
- Establish coordination and planning processes with other Federal and state departments and agencies.

ESF-1

- Coordinate regulatory waivers, exemptions, and permits.

ESF-2

- Issue mission assignments to 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 deployment to NY or NJ

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 the state(s) 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 the state(s) forecasted to be impacted 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 Operations Branch (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., FBI SIOC, NRCC) 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 PSMAs 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 all impacted states (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.

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 Support Emergency Operations Vehicles 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 SEOCs 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, state, tribal, territorial, and insular area 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 state 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 state 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 prioritized critical facilities in need of.

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, state, tribal, territorial, insular area, 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, state, and tribal resources 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 states.
- Review regional recommendations for Major Declaration and Preliminary Disaster Assessments
- 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, state, and tribal 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 the National Ambulance Contract, as required.

ESF-9

- Stage and operate with local incident commanders as designated by state(s) (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, state/local EOCs, and affected area. As ESF-10 responders arrive on-site, establish incident/unified command structures.
- Coordinate with FEMA and local, state, tribal, territorial, and insular area 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 state(s) 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 local, state, tribal, territorial, insular area, and Federal 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.
- Close or transition JFO.

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 the onset of tropical storm force winds will permit issuance of advanced actionable messages to populations within and around the area projected to be affected.

All Hazards Plan Objective: Within two hours, link with impacted State or territory to establish ESF-15 – External Affairs organization within 12 hours to provide public information to the impacted populations in coordination with State governments.

Revised Hurricane Objective: Provide public information to the impacted populations in coordination with the State, local, tribal, and territorial impacted jurisdictions.

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, state CR staff and partner agencies (including disability agencies and divisions) on a regular basis;
- Outreach to states during Hurricane Preparedness Week.
- Respond to inquiries from key EA stakeholders about preparedness.
- Region II External Affairs maintains the capability to respond to an ESF-15 activation by:
    - Planning:
        - Update the Region II Hurricane Operations Plan External Affairs Annex annually.
        - Update the initial strategic communications plan (includes all functional areas), the RRCC SOP, RRCC position checklists and other resources annually.
    - Staffing:
        - Develop staffing plans and rosters for the RRCC, IMAT and field (surge) for all required functional areas.
        - Pre-identify Reservists who may be surged to the RRCC or IMAT
        - 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 at Phase 1b:

- 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, CR, 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 at Phase 1b:

- 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.
- Provide administrative guidance on WebTA; travel policies/procedures and ADD accountability.
- Identify and support resource requirements for photo/video and other field equipment

Planning and Products Key Actions at Phase 1b:

- 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 at Phase 1b:

- In coordination with RRCC director/Ops chief, brief RRCC staff 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 hurricane 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 at Phase 1b:
- 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 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 inquires.

Intergovernmental Affairs Key Actions at Phase 1b:
- Prepare event-specific spreadsheet that includes the following:
    - Contact list for potentially affected state and local governments.
    - Background data (past disasters, hot issues, etc.)
    - Record of office visits , interactions with stakeholder
    - Event outreach tracking
- Coordinate with tribal liaison to assess federally-recognized tribes potentially affected by storm.
- 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 state 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 in Phase 1c:

- Implement surge plan in coordination with the state PIO and CR 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 in Phase 1c:

- 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 PRNewswire list for potentially affected media markets
- Continue to manage daily activities with RMs in the RRCC.

Planning and Products Key Actions in Phase 1c:

- 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 in Phase 1c:

- 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 preparedness through traditional, social media and digital communications.
- Continue media monitoring and issue news clips and analysis, as needed.

Congressional Affairs Key Actions: in Phase 1c:

- Refine matrix spreadsheet of potentially affected congressional districts based on projected path of storm.
- 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 in Phase 1c:

- 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 state counterpart and tribal liaison.
- Coordinate with potentially affected state and county and municipal governments and associations (with state approval).
- Continue to coordinate with tribal liaison regarding tribal needs
- In coordination with EAO, assess staffing needs, including need for tribal support.

Private Sector Key Actions: in Phase 1c:

- 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 state PS coordinator(s) or POC on all activities related that involve that state.
- 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 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, state, tribal, territorial, insular area, and Federal jurisdictions. Initial public messages have been broadcast to applicable areas using available mechanisms.

ESF-15

External Affairs Key Actions in Phase 2a:

- 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 in Phase 2a:

- 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.
- 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.

Planning and Products Key Actions in Phase 2a:

- 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 in Phase 2a:
- 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:
- Finalize matrix spreadsheet of affected congressional districts
- 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 CODEL ride-alongs and federal response coordination meeting attendance.

Intergovernmental Affairs Key Actions in Phase 2a:
- 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 state counterpart and tribal liaison.

- Coordinate with potentially affected state and county and municipal governments and associations (with state approval).
- Continue to coordinate with tribal liaison regarding tribal needs.
- Continue to assess staffing needs in RRCC, field and for JFO.
- Continues to conduct daily outreach to state, local and tribal offices 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 in Phase 2a:
- Continue to coordinate with HQ PS (NRCC) to assess national-level PS partners potentially affected by storm.
- Continue to coordinate with state 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 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 in Phase 2b:
- 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 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 Phase 2b:

- 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 in Phase 2b:

- 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 in Phase 2b:

- Refine key media lists and assignments in each state based on affected areas and key media markets.
- Conduct daily coordination teleconferences with surged 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.
- 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 2b:

- 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 Congressional delegation ride-alongs and federal response coordination meeting attendance.
- If a declaration is granted, provide information the makeup of the declaration through e-mail advisory and follow-up phone call, or if necessary, conference calls.

Intergovernmental Affairs Key Actions in Phase 2b:

- 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 state counterpart and tribal liaison.
- Coordinate with potentially affected state and county and municipal governments and associations (with state approval).
- Continue to coordinate with tribal liaison regarding tribal needs
- Continue to assess staffing needs in field and for JFO.
- Continue to conduct daily outreach to state, local and state associations to include email advisories/updates/press releases, as well as telephone call-outs and conference calls.
- Maintain communications with state, local and respective state associations.

Private Sector Key Actions in Phase 2b:

- Continue to coordinate with state 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.)
- Conduct conference calls with all PS stakeholders who request information, as necessary, including but not limited to, shipping 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 in Phase 2c:

- 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 in Phase 2c:

- 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.
- 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 in Phase 2c:

- 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 in Phase 2c:
- 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.
- Conducts daily coordination teleconferences with surged staff

Private Sector Key Actions in Phase 2c:
- 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 in Phase 3a:
- Conduct public/private events, workshops, or exhibits in each declared state/territory/tribal nation 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 state 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 in Phase 3a:
- 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 in Phase 3a:
- 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 in Phase 3a:
- Continue to coordinate with state Private Sector 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.).
- Conduct conference calls with all private sector stakeholders who request information, as necessary, including but not limited to, shipping 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.

All Hazards Plan Objective: Triage requirements from multiple jurisdictions and prioritize emergency-level health and medical treatment resources to meet critical needs.

Revised Hurricane Objective: Within 24 hours of safe conditions, have teams on site at State specified facilities to provide life-saving, life-sustaining services.

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 each State/territory 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 with Capability Group agencies.

Phase 1b – Elevated Threat
End State: Trained medical personnel and equipment are inventoried for potential deployment.

ESF-8
- Monitor tropical cyclone threat and review REC rosters and availability.

Phase 1c – Credible Threat
End State: Medical caches are staged or ready for deployment and information exchanges with local, state, tribal, territorial, and insular area officials have occurred.

ESF-1
- In conjunction with ESF-8 identify transportation corridors available for medical transportation.

ESF-5
- Activate ESF-8.
- Execute FEMA ambulance contract.
- 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.
- Maintain database for shelter population and cross-references with medical evacuation.

ESF-7
- Coordinate with ESF-8 for staging of pre-deployed ESF-8 resources.

ESF-8
- 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 State;
- Validate operability of existing medical facilities and develop Needs Assessment for deployment of personnel and supplies.
- Establish information sharing with State governments to communicate changes in shortfalls.
- Coordinate medical evacuation support as required; subtasks include:
    - Determine State patient transportation capabilities,
    - Initiate National Ambulance Contract for ground transportation,
    - Coordinate with the State(s) 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 State(s) with managing animal response needs and provide technical assistance.

ESF-13
- Develop assessment and deployment of security support for shelters.

- Coordinate with state 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 State 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 state, 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 State 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. Disaster Case Management assists eligible survivors with developing and carrying out a disaster recovery plan. Streamline assistance, prevent duplication of benefits, and provides an efficient referral system.
- 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, state, tribal, territorial, and insular area efforts to provide care to those likely to survive their injuries.

ESF-8:
- Integrate HHS pharmacy prescription support for a population if requested by state 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;
- State 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:
    - HHS recommends to FEMA to implement the National Ambulance Contract to provide ground transportation and DOD, if mission-assigned, may register patients and provide air transportation outside of the impacted areas,
    - 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, State, non-governmental organizations (NGO), and private sector health care providers and integrate additional resources to support operations;

- Integrate additional out-of-State 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 State 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.

All Hazards Plan 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.

Revised Hurricane Objective: No change.

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), acts of terrorism, and natural disasters in support of the responder operations and the affected communities.

ESF-5
- Develop PSMAs 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; and
- 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, state, tribal, territorial, and insular area 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 State 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 State 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 State jurisdictions; and
- Coordinate with State partners to identify locations of hazardous materials storage, treatment, and disposal sites and other potential 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 State 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 State 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, state, tribal, territorial, and insular area officials for any remaining environmental response activities, and any needed Federal advice on continued protection of local, state, tribal, territorial, and insular area 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 impact of the tropical cyclone.

All Hazards Plan Objective: Make accurate assessment of fatalities in each incident and plan deployment of public and private resources to augment local medical examiners.

Revised Hurricane Objective: No change.

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 State and community-based mental health NGOs;
- Coordinate Federal protocols to provide State 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 State 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, state, tribal, territorial, and insular area 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 State partners to obtain initial fatality impacts and local and state 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 state 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 State 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, State, 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 State 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 tropical cyclone, 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 tropical cyclone, as this may cause damage to or storm water infiltration into the existing water distribution system as well as damage/inaccessibility of roadway and subway tunnels. 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 that could hamper response and recovery efforts.

All Hazards Plan 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.

Revised Hurricane Objective: No change.

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
- Coordinate CIKR data transfer to Region II Mitigation Division for inclusion in Threat and Hazard Identification and Risk Assessment.
- 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 states.
- *PA Program Managers:* Assist State 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-2

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

ESF-3

- Review threats and stage un-watering assets if flooding potential indicates infrastructure will be underwater.
- Notify and deploy Power Planning Restoration Teams.

- Notify and deploy USACE 249th Engineer Battalion (Prime Power)
- 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, 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 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 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 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 Section and state 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-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.

ESF-13
- Determine staff available to providing additional site security to CIKR if requested by state 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
- Execute support contracts to provide potable water and emergency power
- Coordinate with State partners for prioritized generator installation and cross-check against generator pre-screened facilities
- Coordinate with State partners for CIKR debris clearance priorities
- Assess the need for un-watering crews and resources to deploy into the area.

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 state 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 state partners, provide fuel for first responders through a fuel contract or mission assignment.
- In conjunction with state partners, provide water for communities without water service via sourcing, contracting or mission assignment.

ESF-8

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

ESF-10

- In coordination with rapids 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 Section and the National Recovery 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
- Conduct post-landfall infrastructure and public works assessment
- Coordinate installation of generators at prioritized sites that enable life-saving/life-sustaining activities.
- Conduct debris removal and restoration/temporary repair operations at public CIKR facilities (continue through all phases).

ESF-5
- Execute the rapid needs assessment plan in conjunction with ESF, OFA, and state 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 state and local 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 state 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 Law Enforcement 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 state partners and as rapid needs assessments are completed.
- Provide technical support to IA-Technical Assistance Contract (TAC) and ESF #6 on Housing planning and strategies
- Implement the Blue Roof Mission to include Advanced Contracts Initiative (ACI) contracts

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: 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 Assistance

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.

All Hazards Plan Objective:
Deploy mass care services for up to 25 percent of the impacted population.

Revised Hurricane Objective: No change.

Concept of Operations for Mass Care/Emergency Assistance

New Jersey

In New Jersey Mass Care and Emergency Assistance service delivery in response to a tropical cyclone can be complex given the small geographic footprint of the state, the extensive shoreline, the influx of tourists during peak hurricane months, existence of diverse populations, and a combination of urban and rural communities. Some areas of the state have large concentrations of undocumented individuals who may be hesitant to seek shelter and other lifesaving and life sustaining services. Populated islands also exist in the state and will require mass care and emergency assistance support.

The New Jersey Department of Human Services (DHS) is the lead agency for mass care services and has several task forces to coordinate planning and response. The Salvation Army and the New Jersey Foodbank play leadership roles in the Feeding taskforce. The American Red Cross (ARC) serves in a leadership capacity on the Sheltering task force. New Jersey also has extremely active Children's and Disabilities/Access and Functional needs task forces.

New Jersey is unique in that the state has pre-positioned shelter trailers in all 21 counties. Additionally, they have 2 shower trailers and 3 field kitchens equipped to produce 10,000 meals per kitchen per day. These are state owned assets that can be utilized as directed by the State.

The New Jersey Department of Agriculture has been very active in supporting County Animal Response Teams (CART's) and have active teams and equipment distributed throughout the state.

New Jersey has signed an MOU with FEMA to use the FEMA National Shelter System (NSS) for tracking of shelter operations. Although the MOU is signed at this time the state does not have sufficient trained personnel to fully utilize the system. The ARC NSS populates data into the FEMA system so this is not an impediment to identifying shelter trends.

New York

Mass Care and Emergency Assistance provide critical life-saving and life sustaining support to disaster survivors and is a component of Emergency Services Function (ESF) 6. Mass Care in New York State as per their plans refers to the implementation of sheltering, feeding operations, emergency first aid, bulk distribution of emergency items and collecting and providing information on survivors to family members.

Emergency Assistance support is provided through a network of state agencies to provide support to mass evacuation support, access and functional need support, household pet and service animal support, nonconventional/transitional sheltering, volunteer and donation management and voluntary agency coordination.

In New York State the NYS Human Services Annex Mass Care Support Plan Appendix will be receiving final comments from stakeholders on June 1, 2014. It is expected to be approved by the state shortly thereafter. The plan is reviewed and updated annually. Mass Care Agency leads for the State are: American Red Cross, New York Department of Health (NYSDOH), and Office of Mental Health. New York State provides shelter locations to the FEMA regional office every spring.

A large number of disasters, which have necessitated Federal assistance, have been the result of flooding, severe winter weather, and coastal storms. Mass Care and Emergency Assistance service delivery is complex given the vast geography, existence of diverse populations, and a combination of urban and rural communities. Some areas of the state have large concentrations of undocumented individuals who may be hesitant to seek shelter and other life saving and life sustaining services. Populated islands also exist in the state and will require mass care and emergency assistance support.

The three lead agencies coordinate the Food Support Unit (FSU), Multi-Agency Feeding Task Force, Sheltering Support Unit (SSU), and the Needs Integration Support Unit (NISU) to ensure effective coordination and service delivery. Other agencies are incorporated as needed. The task forces are comprised of subject matter experts from government, NGO's, and the private sector.

New York State uses the American Red Cross National Shelter System (NSS) as their official reporting tool for shelter numbers and include non-Red Cross shelters in their reports as they receive updates from local government, NGO's, etc. The ARC NSS does not provide pet shelter data. This data is often compiled from various sources including voluntary agencies, state agencies, and other stakeholders.

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, 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
- Determine existing logistics and resource capabilities
- Identify mass care human and material resource gaps based on information from stakeholders
- Establish Memorandums of Understandings , Memorandums of Agreement, blanket purchase agreements, contracts, and PSMAs; and
- Maintain contact with State governments and NGOs that supply mass care and emergency assistance subject matter expertise
- Conduct training and exercises to validate existing plans
- 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

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 states in regard to mass care and emergency assistance capabilities and preparedness activities
- Participate in State and Voluntary Organizations Active in Disaster (VOAD) conference calls
- Report mass care & emergency assistance activity to Regional Watch Center and/or RRCC Resource Support Section
- Coordinate with Resource Support Section (RSS) to identify additional NGO/OFA requirements for RRCC and possible IMAT support
- Initiate mass care and emergency assistance conference call and/or email communication with ESF 8 (HHS/Administration for Children and Families), ESF 11 (USDA), and the American Red Cross (ARC), mass care co-lead, and FEMA stakeholders including: Regional Disability Integration Specialist (RDIS), Disaster Survivor Assistance DSA), VAL, and Logistics to provide/receive situational awareness
- Review historical data pertinent to the potential area of impact
- Monitor Shelter information systems FEMA National Shelter System (NSS), ARC NSS, and state reports regarding shelter capabilities including:
    - Status (open, standby, impacted, evacuation), 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/ad hoc)

- Capabilities/capacities (e.g., shelter capacity, current number of shelterees, operational kitchen
- Anticipated shortfalls: additional staffing, commodities (food/hydration/hygiene, consumable and durable medical equipment), adaptive technology needs,

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)
- Request GIS mapping by county of shelter locations in potentially impacted counties
- Coordinate with Operations Support Group to identify what commodities are pre-staged, locations, and delivery times to potentially impacted counties
- Coordinate with ESF 1 to identify potential need for mass care support for evacuation efforts
- 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 State Emergency Operations Centers or other locations (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),
  - State mass care services agencies, ESF-6 or equivalent, and State ESF-11 equivalent,
  - Disability agencies and organizations, and
  - Private sector;
- Determine areas impacted;

Available commodities and resources and anticipated burn rates for each

- Identify shelter-in-place locations, populations, and needs, including persons with disabilities and people with access and functional needs;
- Prioritize and coordinate mass care and emergency assistance services and resources for congregate sheltering and impacted shelter-in-place populations, prioritizing for survivors with needs including, but not limited to:
  - Hydration and food,
  - Consumable and durable medical goods,
  - Assistive technology
  - Baby food, formula, and supplies, and
  - Pet supplies such as food, leashes, and cages
  - Clothing

- At the request of the state assist survivors who may not have evacuated, including:
  - Coordinate with ESF-7 (resource support) and ESF-1 (transportation) on additional capabilities to transport identified populations, support required pet evacuation, provide reception capabilities, and

  - Provide assistance in developing mobile feeding/hydration plans
- Maintain tracking of evacuees, durable medical equipment, service animals, pets, and luggage
  - Support evacuation plans by providing mass care support
- 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 and 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 challenged, seniors, persons with limited English proficiency; people with physical, sensory, cognitive, behavioral and/or chronic conditions; and household pets and service animals); and
- Begin reporting shelter numbers supplied by the State to identify trends

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 (shelter locations, etc.).
- Provide information for population that has decided to shelter in place, including boil water alerts, sanitation information, recommended hydration per day, 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-6
- Participate in conference calls with mass care and emergency assistance 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
- Work with the VAL and DSA to gain situational awareness of voluntary agency mass care and emergency assistance activities being provided
- Support applicable planning for the next operational phase(s), including:
  - Anticipated number of meals/snacks needed and identify gaps and sources to meet this gap
  - Identify the ability to provide hydration to impacted populations
  - Identify need for bulk distribution items and develop plan for accomplishing task, and
  - Identify locations of impacted individuals who have sheltered in place and will require mass care and emergency assistance support.
  - either congregated in one area or have sheltered in place, and develop plan to provide mass care;
- Identify the reunification plan being utilized by counties/states and provide information on available federal resources to support this

- Continue providing state reported shelter numbers and share information regarding DSA identified shelters to ARC and the State.
- Monitor and assess mass care and emergency assistance resource requirements

Phase 2b - Deployment

End State: In coordination with the affected states 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
- Develop scalable Table of Organization to support Task Forces for:
    - Mass evacuation support
    - Distribution of Emergency supplies
    - Feeding support
    - Service animals/Household Pets
    - Sheltering
    - Reunification Services
    - Disabilities and Other Access & Functional Needs Support-*may need to embed staff in each task force depending on scale and scope of the tropical cyclone*
- VAL will support the State in volunteer and donations management, and coordination of voluntary agencies.
- Discuss with the state the need for any personal assistance services personnel to support general population shelters.
- Evaluate the potential need for the activation of the Transitional Shelter Assistance (TSA) program.
- Evaluate the feasibility of non-traditional sheltering methods (e.g., private sector solutions, soft-sided shelters, small-sized portable/collapsible shelters).
- In collaboration with the state identify long term and short term mass care and emergency assistance needs and develop plan to right-size operations
- In collaboration with the state and ESF 11 evaluate the need for Disaster Supplemental Nutrition Assistance Program (DSNAP) and or/distribution of food boxes

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-6

- Coordinate and support the States delivery of mass care and emergency assistance services to disaster survivors.
- Coordinate with the RDIS and DSA to identify impacted persons with disabilities and access and functional needs that have not been addressed
- Monitor ongoing and emerging mass care needs, such as sanitation support, shower trailers, and clothes cleaning options
- 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);
- Support NGO mobile feeding capabilities to meet mass care services objective as requested
- 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
- 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.

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 and emergency assistance 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
- Consolidate task forces and staffing to reflect decreased delivery of mass care and emergency assistance activities
- Coordinate with the State and the VAL to develop plans to transition shelter population into longer term housing options
- Support recovery planning, including re-entry planning for survivors in shelters and/or without transportation;
- Coordinate public outreach with ESF-15, updating impacted areas on availability of mass care and emergency assistance services;
- Work with impacted State governments to determine any mass care items they anticipate requesting from FEMA to provide ongoing support to Points of Distribution;
- Coordinate planning regarding mass care support to Disaster Recovery Centers, Family Assistance Centers, etc.

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 will be pre-deployed to the affected areas to augment the local, state, tribal, territorial, and insular area resources in the affected area and perform operations to save lives in flooded and damaged areas.

All Hazards Plan Objective: Assess air, sea, and structural search and rescue requirements and request deployment of assets, as needed.

Revised Hurricane Objective: Prior to landfall, stage anticipated required resources and personnel at the incident support base or facility as requested by the State.

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 State 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
- *SAS:* Establish and maintain situational awareness and a common operating picture.

Phase 1c – Credible Threat
End State: Personnel and resources have been identified and pre-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 (US&R) 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 US&R);
- Coordinate the staging of resources.

ESF-7
- Provide logistical support to Urban and Land 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 responder and/or survivors.
- Assist with debris removal to allow US&R teams to gain access to survivors trapped within collapsed structures.
- Integrate the ISTs into or establish ESF-9 under the Operations Section Emergency Services Branch within the Unified Coordination Group (UCG) staff

- 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.

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; and
- 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 State 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 state 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 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, state, and tribal safety and security resources within the impacted area may be utilized to perform operations to save lives in flooded and 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.

All Hazards Plan Objective: Within 24 hours, support impacted jurisdictions to re-establish public safety operations focusing on saving lives and protecting property.

Revised Hurricane Objective: Prior to landfall, stage anticipated required resources and personnel at the incident support base or facility as requested by the State.

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 State 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 New York and New Jersey 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 State 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 RELC and/or Field Coordinators for possible RRCC staffing.
- Alert available RELCs and Field Coordinators and prepare to staff the RRCC.

Phase 1c – Credible Threat

End State: Assets have been positioned, as appropriate, through coordination with local, state, and tribal 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 State agencies to determine law enforcement support requirements; assess any jurisdictional restrictions on deploying or deputizing Federal law enforcement officers (LEO) for augmentation of State law enforcement;
- Inventory Pre-Scripted Mission Assignments (PSMA) and determine which are applicable to the tropical cyclone to begin deployment to impacted State 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 State jurisdictions for deployed personnel for security or fire service missions, including legal jurisdictions, 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 PSMAs.

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 State 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 transportation of LEOs and resources requested by State governments with ESF-7;
- Deploy assessment teams to coordinate with impacted State 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 and in support of state, local, and tribal authorities.
- 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.)

Tasks by Phase by ESFs:

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 State/local laws.

Phase 3a – Short-Term Recovery
End State: Responsibility for supply chain and location security has started to shift to the local and state jurisdictions; field security concerns have lessened or are non-existent.

ESF-13:
- Review ongoing MAs supporting State 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 being to pre-stage resources depending on the projected onset of tropical storm force winds.

All Hazards Plan Objective: Re-establish the public and private sector supply chain(s) that restores the population's access to prioritized goods and services.

Revised Hurricane Objective: No change.

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., the private sector has a heavy reliance on Verizon and AT&T);
- 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 State 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.

Phase 1c – Credible Threat
End State: Assets have been positioned, as appropriate, through coordination with local, state, tribal, and territorial jurisdictions; 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).

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 state 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, State, and private sector partners to determine support needed, priorities, and their capabilities;
- *Public and Private Services and Resources Group*: to begin providing situational awareness input on power outages and repair timelines;
- 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, state, tribal, 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 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-9
- Notify, activate, and/or deploy Urban Search and Rescue (US&R) teams; deploy US&R caches through secure transportation.

ESF-11
- Coordinate with ESF-6 and states on requests for disaster food assistance.
- Support ESF-6 to coordinate an integrated Federal response to meet the mass care and emergency assistance needs.
- Clarify requests for resources and provide animal subject matter expertise to assist meeting animal response needs (e.g., evacuation and sheltering of animals).

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

ESF-13
- Activate Federal law enforcement resources for deployment the affected area(s).

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 state, local, tribal, and other Federal partners.
- Provide and coordinate firefighting assistance to other Federal land management, state, local, and tribal 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.

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
- Cooperate 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.

ESF-12

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

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 state 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
    - Activate Temporary Housing Units (THU)
    - Coordinate movement of mobile disaster recovery centers (MDRC)

Tab 1 to Appendix 3: Critical Transportation

Highways, airports, railways, 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.

All Hazards Plan Objective: Determine the most appropriate transportation services that facilitate the response and support survivor needs within two operational periods.

Revised Hurricane Objective: No change.

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, state, tribal, and Federal governments as well as with voluntary and private-sector representatives.

ESF-5
- Review debris clearance plans for State jurisdictions and clarify any required Federal or State/tribal 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 State 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 requirements of the response unique to Region II, especially with the series of tunnels, bridges, and commuter services (ferries, subways, railways) connecting the various mainland, islands, and peninsulas of New Jersey and New York;
- 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; and
- Pre-stage resources, as required, to meet anticipated State needs for notice incidents.

Phase 1b – Elevated Threat
End State: Evacuation planning has been coordinated with public- and private-sector transportation system owners and operators.

ESF-5
- *SAS:* 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 identification of potential Incident Staging Bases (ISBs) locations and number of ISBs required.

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 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 (major airports, rail terminals, etc.).
- Coordinate with ESF-5 for execution of the Air Operations Mission and provide Federal Aviation Administration Liaison Officer to Air Operations Branch (see Annex L: Air Operations).
- Coordinate with impacted states to determine DOT waiver requirements.
- Coordinate with ESF-2 for communication capabilities for assessment crews.

ESF-3

- Begin identifying staff available for assessment and debris removal mission.

ESF-5

- Activate the Air Operations Branch (see Annex L: Air Operations) and coordinate with ESF-1.
- Activate the Regional Evacuation Coordination Unit (RECU) and determine additional necessary staff.
- Coordinate with United States Coast Guard to identify critical ports and navigable water-ways 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 state partners to make initial estimate of number of service animals and household pets that will likely need to be evacuated and coordinate with ESF-11.
- Coordinate with state partners, the Regional Disability Integration Specialist, and the RRCC Planning Section to make initial estimate of functional needs populations that will require evacuation.

- Develop mass-care transportation route plan that will support an emphasis on shelter-in-place where possible.

ESF-7
- Initiate 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 pre-landfall evacuation and post-landfall 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, including the activation of the FEMA National Ambulance Contract, 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 state partners for possible pre-landfall 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
- Coordinate with RRCC Individual Assistance Branch Chief in order to identify Disaster Recovery Centers (DRCs) and Mobile Disaster Recovery Centers (MDRCs) locations and transportation requirements.
- Coordinate with ESF-9 for initial proposed routing of Search and Rescue personnel and resources.

- In conjunction with ESF-5 and ESF-13, deploy Department of Homeland Security Federal Air Marshal Transportation Security Advanced Teams to impacted airports.
- 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.
- Provide status of routes to the RRCC Planning Section.

ESF-3
- Coordinate with ESF-1 and RRCC Situational Awareness Section to identify priority routes for debris clearance.
- Prepare to perform debris clearance

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 state partners for provision of additional personnel for security along incident response routes, as well as securing perimeter of incidents.

ESF-15
- Assist state 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
- Based upon initial assessment, coordinate with ESF-3 and Defense Coordination Element and develop debris removal plan and begin clearing debris from priority transportation routes/facilities.
- Based upon impact assessment, coordinate with ESF-3, the Regional Defense Coordination Element, and state partners to prioritize and restore critical transportation routes (bridges, ramps, roads, etc.).
- Based upon impact assessment, coordinate with state partners and Federal Aviation Authority to prioritize and begin restoring airport facilities and capabilities. Assistance may be required to operate aerial ports of debarkation and an air operations branch maybe needed.

ESF-3
- Coordinate with ESF-1 for removal of debris from prioritized/critical roadways (goal is within 72 hours following a declaration).
- Conduct direct critical transportation infrastructure 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.
    - Conduct debris management and technical assistance for removal and final disposal
    - Provide technical assistance during recovery, and assist in reconstruction of critical waterways, channels, and ports

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

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

ESF-12

- Coordinate with state 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 become 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

The conduct of evacuation operations is generally a local, state, and tribal 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 advance 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, and tribal governments.

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. 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 occupancy of premises in the disaster area.
- Order, direct, compel, or recommend an evacuation.

Municipalities, counties and tribal governments 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 private-sector communications until existing communications systems are restored. Responders accessing areas with major wind damage or flooding may need to adapt technological solutions in a physically challenging environment in order to begin communications restoration.

All Hazards Plan Objective: Within 24 hours, facilitate restoration of basic communications among Federal and State response agencies in the affected communities and organizations.

Revised Hurricane Objective: Prior to landfall, complete hardening of telecommunications resources against deformation and power outages.

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 communications interoperability.

ESF-2
- Ensure that the national disaster emergency communications policy for hurricane response is disseminated to national and regional staff.
- Develop, maintain, train, and exercise national disaster emergency communications standard operating procedures (SOP) for hurricane response.
- Participate in hurricane 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 hurricane 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 hurricane 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 and MERS detachments.

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 hurricane path and available resources.

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 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 State 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 liaison.
- Provide situational awareness to planning.
- Assess cyclone response with key partners.
- Participate in Federal partner conference calls.
- Host post-event conference calls with State POCs.
- Respond to communications requirement requests.

Phase 2c – Sustained Response
End State: Sufficient communications have been reestablished within the affected area.

ESF-2
- Occupy DEC branch at JFO as needed.

- Gather situational awareness of regional communications infrastructure.
- Participate in Federal partner Conference calls.
- Coordinate MERS response with MERS liaison.
- Provide situational awareness to planning.
- Host post-event conference calls with State 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.

Appendix 5: Executive Checklist

The following page displays a table identifying major actions to be taken by the states of New Jersey and New York, and New York City (Table A5-1). It also identifies the time before the onset of tropical storm force winds when these actions are expected to be taken at the earliest.

Following the State/City Table is the FEMA Region II Executive Checklist (Table A5-2). It takes the actions from the States and City 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 the States and the City. Both the table and timeline utilize an H-hour system. The "H" symbol 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., initial activation of the New Jersey State EOC is expected to take place at 120 hours before onset of tropical storm force winds while the initial activation of the New York State EOC will take place earlier at 144 hours).

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 the States of New Jersey and New York, and New York City

Major Action to be Taken	When Action will be Taken Hours prior to the onset of tropical storm force (TS) winds		
	New Jersey(NJ)	*New York*(NY)*	*New York City (NYC)*
Initial Emergency Operations Center (EOC) Assessment/ Activation	H-120	H-144	H-120
Evacuation Planning and Preparation	H-96	H-96	H-96
Shelter Planning and Preparation	H-96	H-84 to 72	H-96
Partial EOC Activation Level	H-96	H-96	H-96
Health Care Evacuation Planning and Preparation	H-72	H-72	H-96
Declaration of Emergency	H-72	H-72	H-72
Health Care Facility Evacuation	H-72 to 60	H- 48	H-72
Full EOC Activation Level	H-72	H-72	H-76
Joint Information Center (JIC) Established	H72 to 60	H-72	H-72
Directed Evacuations Commence	H-72-36	H-72 to 30	H-72
County and State Shelter Mobilization	H-48	H-72	H-84
Contra Flow Planning and Preparation	H-48	--	--
Directed Stop of Public Transportation	H-48 to 0	H-6	H-12
County and State Shelters activated –opened	H-36	H-48	H-60
Mandatory evacuation order initiated	H-36	--	--
Contra Flow Start	NLT H-36	--	--
Directed Shelter in Place	H-12	--	
Contra Flow Stop	H-3	--	

* Denotes State/County Timeframes other than NYC

Table A5-2. FEMA Region II Hurricane Executive Checklist

Phase 1B – Elevated Threat (Initial Assessment to H -120 hours before onset of tropical storm force winds)			
Objectives*: 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.* **FEMA Expected Actions/Decisions:** *When and where staff, resources, and key facilities will be located.* **NJ, NYC, and/or NYS:** *shown in bold and red font for FEMA actions specific to them*			
Action Item		**Task to**	**Note**
1B-1	Investigate timing and agenda of Regional Emergency Liaison Team (RELT) call agenda and rhythm.	Watch	This is a conference call hosted by NYC, Nassau, Suffolk, or Westchester Office of Emergency Management (OEM) that will discuss the timing of school closings, general population, special needs, health care facility evacuations, etc. At this point it will be beneficial to know when the calls will start and how frequent they will occur so that calls with New Jersey and New York can be coordinated.
1B-2	Monitor incoming and outgoing information from FEMA HQ, National Response Coordination Center (NRCC), Region II (R-II) Division Directors, adjacent FEMA regional leadership, and State partners of R-II'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 R-II readiness questions. Although it may seem too early, begin discussing the timing for pre-landfall declaration with States. Determine if Stafford Act thresholds are met and discuss any concerns arising. Pay attention to the Stafford Act criteria required for States receiving declarations: (1) A federal agency indicates a major disaster is imminent (2) Governor executes the State Emergency Plan and (3) indicates Direct Federal Assistance (DFA) is needed above and beyond local/state or 3 or more counties (or geographic area equivalent to more than 100,000 individuals) receives evacuations orders
1B-3	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	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-4	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) 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-5	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-6	Brief employees on emergency responsibilities for pre and post-storm operations.	All Division Directors	Task Watch to send out an all-hands email to R-II staff reminding them to review their RRCS/IMAT responsibilities.
1B-7	Ensure the RRCC is prepared for the arrival of staff at least by the H-72 hrs. mark.	Mission Support Director *and* 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-8	Refer to Regional FURRS staffing report to determine RRCS and IMAT teams to	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.

	deploy and where to deploy to (Earle, Regional Office, State/City offices).		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.
1B-9	**NYS** will activate its EOC by H-144 hours.	Situation Awareness	Be prepared to deploy Liaisons to NYS Emergency Operations Center (EOC) in Albany.
H-120 Hours to H-72 Hours (before onset of TSF winds)			
1B-10	**NYS** will implement Level 3 operating structure by H-120 hours.	Situation Awareness	Be prepared to deploy IMAT and Liaisons as well as the HLT (possibly virtually) to NYS EOC in Albany. Ensure billeting and funding will support deployment.
1B-11	**NYS** 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 State EOC can assist with situation awareness (SA).
1B-12	Be prepared for a RELT call as the discussion on evacuation times will begin.	Situation Awareness	Determine when general population and health care facility evacuations will commence; confirm closure of impacted state and county offices, school systems (public, private), other federal offices, and private businesses in threatened areas.
1B-13	**NYC** will activate their EOC by H-120 hours.	Situation Awareness	Be prepared to deploy Liaisons to NYC OEM EOC in Brooklyn.
1B-14	**NJ** will activate their EOC by H-120 hours.	Situation Awareness	Be prepared to deploy Liaisons to NJ Regional Operations Intelligence Center (ROIC) in West Trenton, New Jersey. NJ will be asking for potential federal assistance (DoD, United States Coast Guard (USCG), use of federal bases, deployment of FEMA LNO's, establishing fuel distribution points (aviation, ground) & Federal ESFs to State EOC. Ensure billeting and funding will support deployment.
1B-15	Determine the nature of the hurricane threat to the entire Region II 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, and products from the hurricane evacuation studies (Surge maximum of maximum (MOMs), State/local defined evacuation zones, and clearance time estimates. The analysis the HLT provides 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-16	Begin and continue to gain strategic level situation awareness about the weather system, FEMA and State 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-17	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 dated
1B-18	Create event in WebEOC; ADD location	Response Watch Center	Have Watch establish an event in WebEOC, Mission Support to activate surge account and generate a TA, and create a disaster location in Automated Deployment Database (ADD) for deployments.
1B-19	Confirm that the appropriate pre-scripted MA's and other MA's needed 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 (enough staff, etc.) Begin and continue to pay attention to the actual and predicted unmet needs of the States. (Shelter commodities and staffing, fuel, generators, etc.). Review the list of potential actions within the hurricane plan considering the core capabilities and determine the appropriate mission assignments to issue.

Phase 1C – Credible Threat (H-72 hours until onset of TSF winds)			
Objectives: *Prepare staff, equipment, and supplies for deployment and participate in SA calls paying particular attention to pre-storm actions of the States and locals. Begin to synchronize R-II 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-declaration for States – if and when. Level of Federal Support* **NJ, NYC, and/or NYS:** *shown in bold and red font for FEMA actions specific to them*			
	Action Item	**Task to**	**Note**
	H-72 to H-48 Hours before onset of TSF winds		
1C-1	At H-72 hours, if not already requested **NYS, NYC OEM,** and **NJ** will submit for disaster declarations.	Legal	Work with R-II 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 whether or not the storm meets a certain category threshold (category 3 for example), the time period covering the emergency period, etc.
1C-2	**NYS** will go to 24/7 EOC operations and will activate their Joint Information Center (JIC) within this timeframe.	ESF 15	Ensure IMAT, LNOs, and ESF15 are prepared to support virtually and eventually in person.
1C-3	At the H-60 hour time-mark, **NYC OEM** will open their sheltering system.	Situation Awareness	This is an indication that surge zone evacuations are nearing. Ask for regular SA briefings on NYC OEM sheltering and evacuation operations. Shelter population and surge zones being evacuated are indicators to evacuee reception capabilities and possible shelter commodity unmet needs.
1C-4	Receive briefing on Public Service Announcements local and States will be issuing.	ESF-15	Work with supported states 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-5	Request inventory brief on commodities such as such as water, food, fuel, generators that will be needed pre and post storm and the locations of the staging areas.	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-6	Assure that MAs are issued under the 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 State requests, issue DFA (Direct Federal Assistance) missions.
1C-7	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, evacuation timing via HURREVAC, surge maximum envelop of water (MEOWs) from the SLOSH display program, and rainfall forecasts.
1C-8	Evaluate the possibility of National Level Contracts	Resource Support Section Chief	Assist the State with requesting the execution of national-level contracts. These include: – Ambulance Contract – Evacuation Technical Assistance – IA TAC (Mass Care) – Responder Support Camp If the state requests, begin coordination calls w/HQ and/or NRCC.
1C-9	Consider extended operations based on hurricane forecast.	Chief or Deputy of RRCS	Request HQ to support with staffing.
1C-10	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-11	Obtain USACE disaster impact modeling results starting at H-72 and continuing through	Situational Awareness and Recovery	Disaster impact modeling includes debris, ice/water, blue roofs, critical facilities etc.

	landfall		
	H-48 to H–24 Hours Before onset of TSF winds		
1C-12	At H-48 hour mark, **NYS** will conduct a Principals Meeting to discuss disaster declaration.		There are certain Stafford Act provisions that need to be met before pre declarations can be made. IMAT and Liaisons at State EOC can assist with situation awareness (SA).
1C-13	At the H-48 hour time-mark, **NYS** will open their sheltering system (outside of NYC)		Be mindful that the storm can result in wind and flood damage north and west of NYC and NYS will support shelters opened by impacted counties.
1C-14	At the H-36 hour time-mark, **NJ** will commence directed evacuations and their shelter system will be activated and open.		Monitor the unmet shelter needs NJ may not be able to support.
1C-15	Determine NYC and NYS evacuation start and end times	Situation Awareness Section	Contact NYC and NYS officials to establish evacuation start and end times
1C-16	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 Region. Be aware of other Federal agencies doing continuity of operations (COOP) or devolution.
1C-17	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. The States should have pre-designated staging locations to accept logistics and commodities – have GIS map if possible.
1C-18	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 State unmet needs.
1C-19	Monitor the status of critical infrastructure and key resources – to include private sector operations via State and HQ conference calls.	Situation Awareness	Communicate with the USCG (sea) and NYNJ 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 Target, Wal-Mart, and Home Depot can provide their information on their delivery/supply schedule based on hurricane landfall.
	H-24 hours prior to TSF winds		
1C-20	At H-12 hours, **NYS** and **NJ** will direct the stop of Public Transportation		This will impact the movement of evacuees still in transit. Be prepared for shelter in place instructions and if that will impact operations (primarily sheltering).
1C-21	At H-12 hours, **NJ** will issue a Shelter in Place announcement		Ensure ESF 15 has aligned proper messaging at the JIC.
1C-22	At H-12 hours **NYC OEM** will direct the stop of Public Transportation		This will impact the movement of evacuees still in transit. Be prepared for shelter in place instructions and if that will impact operations (primarily sheltering).
1C-23	At H-3 hours, **NJ** will stop the Contra Flow of traffic		Sheltering unmet may occur as evacuees seek refuge of last resort at shelters along evacuation routes.
1C-24	Obtain a copy of the joint Incident Action Plan IAP with the state(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-25	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-26	Model projected impacts	Situation Awareness	Through HLT, have SA interpret Probabilistic Storm Surge and the Storm Surge Inundation Graphic (at H-48 and H-24). Also consider having a HAZUS or Army Corps disaster impact 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-27	Prepare for widespread flooding and power outages secondary to storm surge and	Resource Support Section Chief	Be prepared (deploy/stage assets as appropriate at ISB or other locations outside affected area) for States to request: • Saw crews

	down trees if maximum sustained and wind gusts are forecasted to exceed 50 mph and high tide is occurring simultaneously to hurricane arrival.		• Un-watering pumps • Debris removal equipment • Generators & fuel • Light towers • Search & Rescue teams • Communications equipment Decision on what items needed can be assisted through models, historical reference, subject matter experts, etc.
1C-28	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-29	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 States and FCO's in discussion.

Phase 2A/B – Deployment (Onset of TSF Winds to +72 Hours After TSF 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**
	Onset of TSF 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 current weather situation such as heavy rains, tornados, high winds in order to determine when exactly 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 Hours to +72 After TSF Winds Subside		
2A/B-2	Identify re-entry SLLT status/process	Situational Awareness	Obtain status from States and NYC on timing of re-entry or residents into evacuated communities, and special needs/hospitals returning to their respective locations.
2A/B-3	Coordinate with States on disaster declarations.	Legal Advisor	Legal will review Governors' 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 R-II 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 States and NYC 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, etc.	Infrastructure Assets Group	Deploy Prime Power Team for generator unmet needs. Understand the State'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 Authority for the status of the Air and Sea ports.	Infrastructure Assets Group	Closure of the sea ports and NYC harbor will have secondary effects to incoming fuel deliveries. Airport closures due to debris or flooding will result in a lack of hotel availability. Identify which federal resources can assist in opening ports.
2A/B-11	Check on status of essential transportation infrastructure.	Infrastructure Assets Group	Flooded subways and tunnels are to be prioritized by NYC and States for USACE to deploy un-watering pumps.
2A/B-12	Obtain briefing on the need for temporary housing.	ESF 6	Coordinate with the States and NYC on the areas affected - consider sites for temporary housing solutions. Refer to the temporary repair programs for homes used during Sandy.
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 demobilization plan.	Planning Support	Once transition plan is implemented, work with RRCC Chief on timely release of RRCS. Make certain States and NYC 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
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
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
OFA	Other Federal Agencies
PA	Public Assistance
PPE	Personal Protective Equipment
POD	Point of Distribution
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
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
US&R	Urban Search and Rescue