

Typhoon Dolphin  
NASA, 2015

# 2018 Guam Catastrophic Typhoon Plan

Appendix A to the Tropical Cyclone Annex,  
Guam Comprehensive Emergency Management Plan

Annex to the FEMA RIX All-Hazards Plan

*February 13, 2018*



**FEMA**



***Message from the Governor of Guam  
and FEMA RIX Regional Administrator***

Dear Emergency Management Partner:

It is with great satisfaction that the Guam Homeland Security Office of Civil Defense and the Federal Emergency Management Agency (FEMA) present this *2018 Guam Catastrophic Typhoon Plan*, which is an annex to the *FEMA Region IX All-Hazards Plan*. The completion of this plan culminates nearly 2 years of work with government partners and Whole Community stakeholders to define strategies for a response to a catastrophic typhoon affecting the Territory of Guam.

Developed in accordance with Presidential Policy Directive 8 (PPD-8) – National Preparedness, this plan outlines a process for activation and deployment of resources and capabilities to save and sustain lives and restore the region’s critical infrastructure. The goal of the plan is to quickly re-establish operational capability to the territory and facilitate a Whole Community response to the disaster that sets the conditions for recovery.

This executable plan represents the combined capabilities of the private sector, nongovernmental organizations, and territorial and federal response partners. This approach has helped foster public-private partnerships and has led to the development of a comprehensive plan that will help Guam better prepare to respond to and recover from a catastrophic typhoon.



Honorable Eddie Baza Calvo  
*I Maga' Låhen Guåhan*  
Governor of Guam



Robert Fenton  
Regional Administrator  
FEMA Region IX

## ***Handling Instructions***

Questions pertaining to the dissemination, transmission, or destruction of this plan or to obtain a copy of U.S. Department of Homeland Security (DHS) Management Directive 11042 should be submitted to the FEMA Regional Planning Branch, 500 C Street SW, Washington, D.C., 20472. Questions or requests may also be submitted to the Response Division Director, FEMA, Region IX, 1100 Broadway, Suite 1200, Oakland, California, 94607-4052.



## *Executive Summary*

This *2018 Guam Catastrophic Typhoon Plan* is a capabilities-based document that follows National Incident Management System (NIMS)/Incident Command System (ICS) principles and will facilitate effective and efficient response and recovery operations in the response to a catastrophic typhoon strike on Guam. It supersedes the previously issued *2010 Guam Catastrophic Typhoon Plan*.

This plan was developed collaboratively with local, territorial, federal, nongovernmental, and private sector partners, consistent with the Whole Community doctrine. This plan presents actions that key Core Capability stakeholders may take to save and sustain lives and protect property of survivors impacted by a catastrophic typhoon on Guam.

While this plan focuses on providing federal support to the Territory of Guam, given the proximity of Guam to the Commonwealth of the Northern Mariana Islands (CNMI), the execution concepts of this plan should not preclude collaborative efforts between CNMI and Guam along with FEMA Region IX for achieving a coordinated and effective regional (“Marianas”) response.

This plan was developed as a deliberate plan using a specific Category 5 storm scenario as a guide to its development. Under a credible threat, this deliberate plan may be used as a guide to be modified based on the actual situation, in developing a storm-specific crisis action plan to address deployment, employment, and sustainment of federal resources in support of the Territory of Guam.

This plan will undergo joint periodic review to incorporate policy updates, new guidance, and lessons learned from exercises and actual incidents in order to best protect the lives, property, and environment of the communities and jurisdictions within the Territory of Guam.

Robert Fenton  
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# 1 Situation

The 2018 Guam Catastrophic Typhoon Plan is an annex to the FEMA Region IX All-Hazards Plan and supersedes the 2010 Guam Catastrophic Typhoon Plan. This plan was developed in accordance with Presidential Policy Directive 8 (PPD-8) – National Preparedness and is in alignment with the response Federal Interagency Operational Plan (FIOP). Critical stakeholder actions (activation and deployment of resources/capabilities) to save and sustain lives and restore the territory’s critical infrastructure that are presented here inform a Whole Community response to the physical and operational impacts of a catastrophic typhoon on Guam while setting the conditions for a successful recovery.

## 1.1 Threat

A Category 5 typhoon scenario was developed for this plan (see Figure 1 below) by the Weather Field Office Guam (WFO Guam) of the National Weather Service (NWS). For detailed information on the storm scenario and its physical effects and operational impacts, refer to Appendix B: Intelligence.

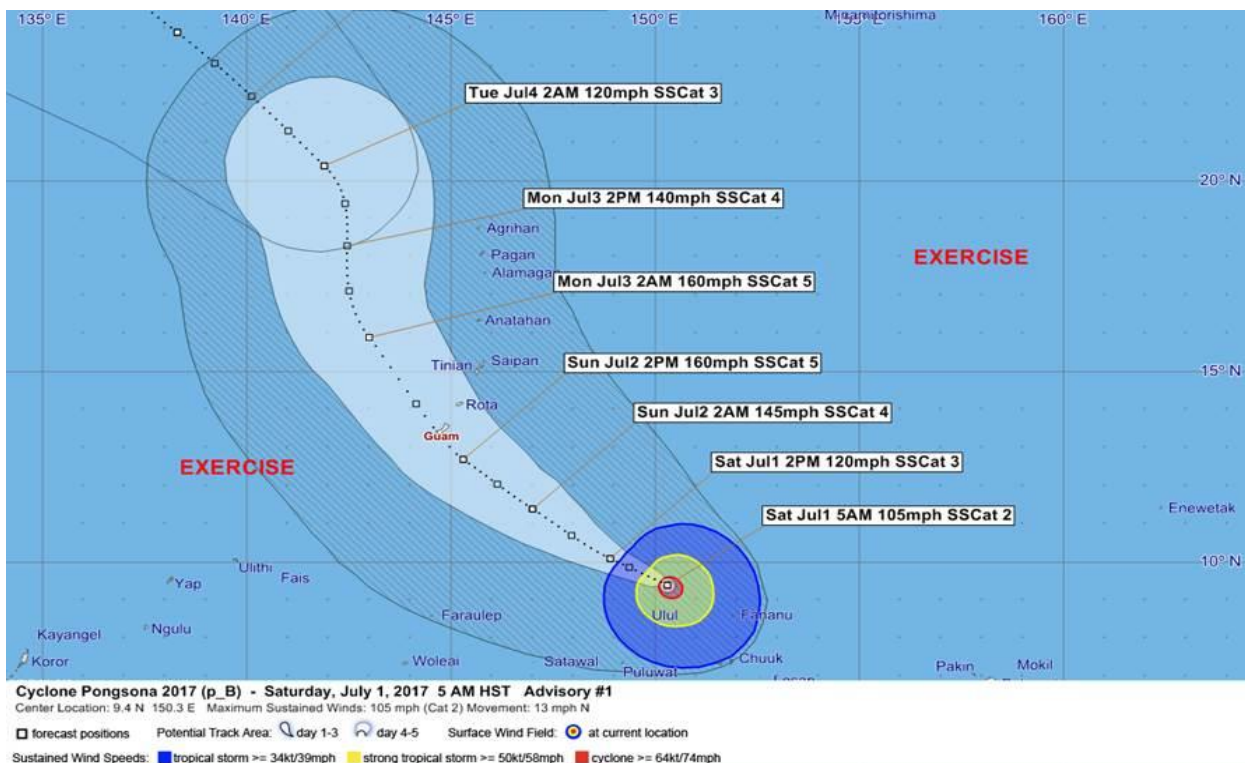


Figure 1: Storm Track

# 2 Mission

The mission of the joint territory/federal response organization is to save and sustain lives, support the restoration of critical lifeline infrastructure, and assist in re-establishing the commercial supply chain, leveraging organic capabilities and cooperation in both the Commonwealth of the Northern Mariana Islands (CNMI) and Guam.

## **3 Execution**

### **3.1 Senior Leaders' Intent**

Territorial and federal emergency managers ensure unity of effort when establishing a joint territorial/federal Unified Coordination Group (UCG) to coordinate disaster response activities consistent with the priorities set by the Governor of Guam.

### **3.2 Concept of Operations**

#### ***3.2.1 Joint Catastrophic Typhoon Planning***

This operational response plan considers the physical effects and operational impacts from a Category 5 typhoon impacting Guam. In the absence of damage estimate modeling, the plan relies on experiential data from Typhoon Pongsona, which struck Guam in 2002.

Whole Community partners were engaged in the development of the plan and are its intended audience. Consistent with the principles in the National Response Framework (NRF), National Preparedness Goal (NPG), and FIOP, this plan analyzed Core Capabilities in developing response strategies that increase collaboration, coordination, and information-sharing prior to (in preparedness), during (in response), and after (in recovery) a catastrophic typhoon impacting Guam and will ultimately result in a more secure and resilient nation when executed.

#### ***3.2.2 Critical Planning Assumptions***

A typhoon typically takes several 3 to 5 days to form and gains in strength the longer it is over warm water, such as the waters of the western Pacific. The Joint Typhoon Warning Center (JTWC) is the primary information source relied on by WFO Guam in developing its advisories and warnings.

- A Category 5 typhoon strike on Guam will overwhelm territory resources used in typhoon response operations and require supplemental federal resources and capabilities under the NRF and Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act).
- A Presidential Major Disaster Declaration is issued under the authority of the Stafford Act and provides for concurrent response, recovery, and mitigation activities.
- The incident response will require specialized equipment and adjustments to processes, priorities, and procedures, as appropriate to the operational environment.
- Federal departments and agencies will coordinate and take action under their own statutory authorities and/or under the Stafford Act, as appropriate.
- Situational awareness of the operational environment will be incomplete.
- Critical transportation routes and infrastructure will be disrupted by the incident.
- Given the time and distance required for travel from the continental United States (CONUS) to Guam (UMT-10; 13-24 hours by air), response resources may be mobilized toward and staged off-island until the storm has passed.



- Deployment-dependent federal response resources will be unable to arrive and provide significant lifesaving or life-sustaining capabilities until 24 to 72 hours after the incident.
- Within the affected population, some will have disabilities or access and functional needs that require physical, programmatic, and/or communications access.
- A catastrophic typhoon may require the positioning of resources or capabilities as early as 5 days prior to impact, given the time/distance from CONUS.
- Guam response personnel will be personally affected by the disaster and may be unable to perform response duties.
- The Guam community is small and has a strong indigenous culture that shapes social interactions and familial bonds.
- Whole Community organizations, including private sector and nongovernmental organizations (NGOs), as well as disaster survivors will be involved in response efforts.
- The Government of Guam (GovGuam) will activate their Emergency Operations Center (EOC), declare a territory State of Emergency, take pre-impact actions to safeguard the population and resources, and prepare for storm impact tasks and actions, to include reception of federal resources.
- The Governor will request a Presidential Emergency or Major Disaster Declaration upon evaluating initial damage assessments and determining the severity of the typhoon's impact.
- The typhoon is not expected to simultaneously impact another U.S. territory or commonwealth that would require an additional federal response.
- There are no competing events for federal resources, allowing the full complement of federal resources and capabilities to be applied as available.

### **3.2.3 Critical Operational Considerations**

- Guam is strategically located in the western Pacific for defense purposes.
- The western Pacific experiences between 25 to 30 typhoons each season. During El Nino years, that frequency increases. The Port of Guam is the gateway for cargo shipped by sea destined for other Mariana islands. Cargo originating from CONUS or Asia is received in Guam and loaded onto smaller vessels for transport to other locations in the Marianas, including CNMI, islands within the Republic of the Marshall Islands (RMI), and the Federated States of Micronesia (FSM).
- Over 95 percent of commodities destined for Guam arrive via ship and are processed at the Port of Guam.
- Apra Harbor contains both a commercial harbor with port facilities (the Port of Guam) as well as a U.S. Department of Defense (DOD) harbor with facilities; both harbors share one harbor entrance.
- The Port of Guam expects to restore limited operations within 3 to 5 days, post-event.

- The A.B. Won Pat International Airport on Guam expects to restore operations within 48 hours of an event.

**3.2.4 Using the Plan and Core Capability Analyses**

In Table 1, the 15 Response Core Capabilities applicable to this plan are listed in Column 1; the preliminary targets for those Core Capabilities are listed in Column 2, and references to areas within this plan that can assist operators and planners in finding relevant information for the response are listed in Column 3.

The first three Core Capabilities are considered global Core Capabilities because they apply across all mission areas of the NPG and are “enablers,” meaning they are necessary to the success of the remaining Core Capabilities. Operational Communications has been added to these three “enabler” Core Capabilities because it is critical to any response and should be considered by Whole Community stakeholders in responding to this outside the continental United States (OCONUS) event. The next five Core Capabilities are the drivers of this response plan and are specifically considered in the event that a catastrophic typhoon impacts Guam. These provide a reference for the Whole Community response, as they define resources and strategies for the response. (At Guam’s request, eight (8) operational objectives were developed for this plan that are in alignment with these five critical Core Capabilities.) The remaining Core Capabilities may be considered to varying degrees when executing this plan.

For more information on Guam’s strategies for meeting Core Capability requirements, refer to the Guam Threat and Hazard Identification and Risk Assessment (THIRA).

**Table 1: Core Capability Targets and Plan References**

Core Capability	Preliminary Target	Reference
<b>Planning</b>	Conduct a systematic process engaging Whole Community partners, as appropriate, in the development of executable strategic-, operational-, and/or tactical-level approaches to meet defined objectives.	<ul style="list-style-type: none"> <li>▪ FOPM</li> <li>▪ Base Plan</li> </ul>
<b>Public Information and Warning</b>	Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard and, as appropriate, the actions being taken and the assistance being made available.	<ul style="list-style-type: none"> <li>▪ Appendix F – Public Information and Warning</li> </ul>
<b>Operational Coordination</b>	Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of Core Capabilities.	<ul style="list-style-type: none"> <li>▪ Appendix A – Task Organization</li> </ul>

Core Capability	Preliminary Target	Reference
<b>Operational Communications</b>	Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available among and between affected communities in the impact area and all response forces.	<ul style="list-style-type: none"> <li>▪ Appendix E – Operational Communications</li> </ul>
<b>Critical Transportation</b>	Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals and the delivery of vital response personnel, equipment, and services into the affected areas.	<ul style="list-style-type: none"> <li>▪ Base Plan</li> <li>▪ Appendix C – Operations</li> <li>▪ Appendix D – Logistics</li> </ul>
<b>Infrastructure Systems</b>	Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.	<ul style="list-style-type: none"> <li>▪ Appendix C – Operations</li> </ul>
<b>Logistics and Supply Chain Management</b>	Deliver essential commodities, equipment, and services in support of impacted communities and survivors, to include emergency power and fuel support as well as the coordination of access to community staples; synchronize logistics capabilities and enable the restoration of impacted supply chain.	<ul style="list-style-type: none"> <li>▪ Base Plan</li> <li>▪ Appendix C – Operations</li> <li>▪ Appendix D – Logistics</li> </ul>
<b>Mass Care Services</b>	Provide life-sustaining human services to the affected population, to include hydration, feeding, sheltering, temporary housing, evacuee support, reunification, and distribution of emergency supplies.	<ul style="list-style-type: none"> <li>▪ Appendix C – Operations</li> <li>▪ Appendix D – Logistics</li> </ul>
<b>Public Health, Healthcare, and Emergency Medical Services</b>	Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical, and behavioral health support and products to all affected populations.	<ul style="list-style-type: none"> <li>▪ Appendix C – Operations</li> <li>▪ Appendix D – Logistics</li> </ul>
<b>Environmental Response/Health and Safety</b>	Conduct appropriate measures to ensure the protection of the health and safety of the public and workers as well as the environment from all hazards in support of responder operations and affected communities.	<ul style="list-style-type: none"> <li>▪ Appendix C-9</li> </ul>

Core Capability	Preliminary Target	Reference
<b>Fatality Management Services</b>	Provide fatality management services, including decedent remains recovery and victim identification, working with local, state, tribal, territorial, insular area, and federal authorities to provide mortuary processes, temporary storage or permanent internment solutions, information-sharing with Mass Care Services for the purpose of reunifying family members and caregivers with missing persons/remains, and providing counseling to the bereaved.	
<b>Fire Management and Suppression</b>	Provide structural, wildland, and specialized firefighting capabilities to manage and suppress fires of all types, kinds, and complexities while protecting the lives, property, and the environment in the affected area.	<ul style="list-style-type: none"> <li>▪ Appendix C-10</li> </ul>
<b>Mass Search and Rescue Operations</b>	Deliver traditional and atypical search and rescue capabilities, including personnel, services, animals, and assets, to survivors in need, with the goal of saving the greatest number of endangered lives in the shortest time possible.	<ul style="list-style-type: none"> <li>▪ Appendix C-11</li> </ul>
<b>On-scene Security, Protection, and Law Enforcement</b>	Ensure a safe and secure environment through law enforcement and related security and protection operations for people and communities located within affected areas and also for response personnel engaged in lifesaving and life-sustaining operations.	<ul style="list-style-type: none"> <li>▪ Appendix C-12</li> </ul>

### 3.2.5 Operational Objectives

The following eight operational objectives were developed for this plan (no prioritization of these objectives was intended or should be inferred).

1. Provide emergency power to maintain continuity of essential operations.
2. Restore the power infrastructure.
3. Stabilize the water distribution and wastewater systems.
4. Deliver fuel to maintain continuity of essential operations and services.
5. Conduct mass care services and sheltering of survivors.
6. Restore essential operations at the Port of Guam.
7. Distribute essential commodities and immediate response resources.
8. Re-establish public health and medical services at critical emergency medical facilities.



**For a crosswalk of each operational objective against the appropriate Core Capabilities,  
see**

Table 2.

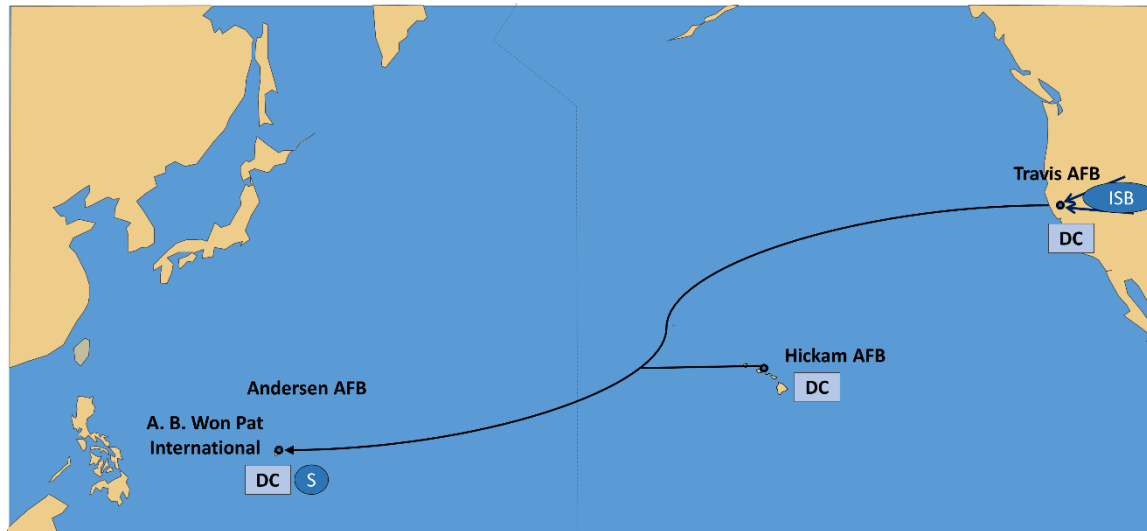
**Table 2: 2018 Operational Objectives and Core Capabilities – Guam**

2018 Operational Objectives and Core Capabilities – Guam									
		Provide emergency power to maintain continuity of essential operations	Restore the power Infrastructure	Stabilize the water distribution and wastewater systems	Conduct mass care services and sheltering of survivors	Re-establish public health and medical services at critical emergency medical facilities	Deliver fuel to maintain continuity of essential operations and services	Restore essential operations at the Port of Guam	Distribute essential commodities and immediate response resources
Mission Area	Core Capabilities	Infrastructure Systems			Mass Care Services		Logistics / Supply Chain Management		
	Planning	•	•	•	•	•	•	•	•
	Public Information and Warning	•	•	•	•	•	•	•	•
	Operational Coordination	•	•	•	•	•	•	•	•
Response	Infrastructure Systems	•	•	•			•	•	•
	Critical Transportation	•	•	•	•	•	•	•	•
	Environmental Response/Health and Safety	•	•	•	•		•	•	
	Fatality Management Services					•			
	Fire Management and Suppression						•	•	
	Logistics and Supply Chain Management	•	•	•	•		•	•	•
	Mass Care Services	•	•	•	•			•	•
	Mass Search and Rescue Operations								
	On-scene Security, Protection, and Law Enforcement				•		•		
	Operational Communications	•	•	•	•	•	•	•	•
	Public Health, Healthcare, and Emergency Medical Services				•	•			
Situational Assessment	•	•	•	•	•	•	•	•	
Recovery	Infrastructure Systems	•	•	•				•	•
	Economic Recovery		•	•			•	•	•
	Health and Social Services		•	•		•			
	Housing				•				
	Natural and Cultural Resources								
Mitigation	Community Resilience				•				
	Long-term Vulnerability Reduction				•			•	
	Risk and Disaster Resilience Assessment		•	•	•	•		•	
	Threat and Hazard Identification		•	•	•	•		•	

### 3.3 Concept of Support

#### 3.3.1 Critical Transportation

Guam is strategically located in the western North Pacific, close to Asia and a significant distance from Hawaii (OCONUS) or CONUS, where federal support originates. The Critical Transportation Core Capability is of greatest importance when providing OCONUS federal support. For Guam, Critical Transportation requires robust air and marine transportation systems in support of response operations.

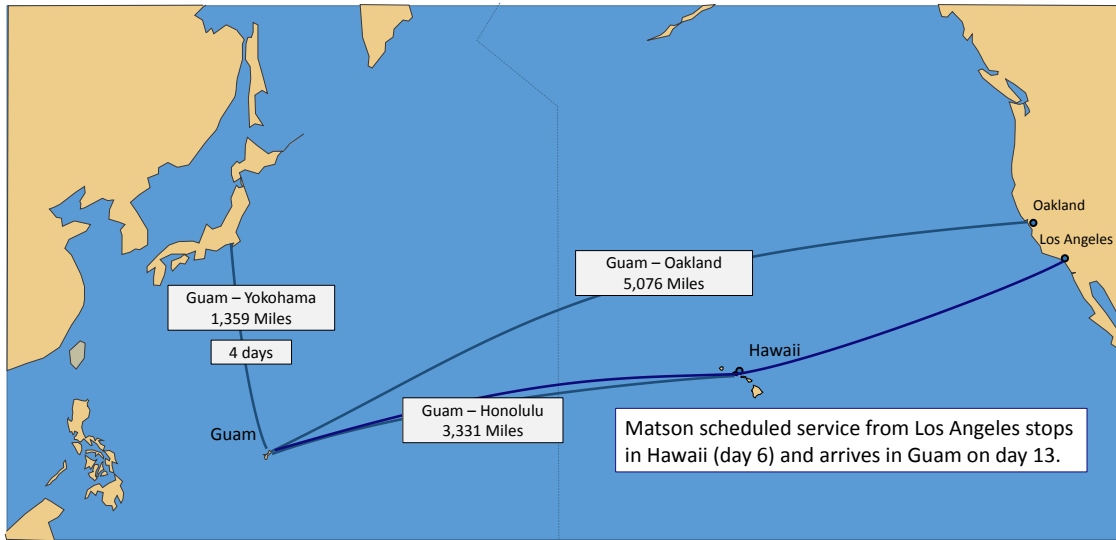


**Figure 2: Air Transportation Routes to Guam**

**Air Transportation** – Air transportation is used for high-priority air transportable resources moving to the incident site and may include personnel, equipment, and commodities arriving by fixed-wing aircraft and subsequent movement once in Guam by rotary-wing (helicopter) lift or a combination of rotary-wing and surface lift. Four facilities were identified for facilitating the delivery of resources by air:

- **Travis Air Force Base (AFB)** is the primary CONUS Incident Support Base (ISB) location for federal resources arriving by fixed-wing aircraft. It is the departure airfield for select resources from Distribution Center (DC) Moffett and from commercial vendors.
- **Hickam AFB** is the primary departure airfield for fixed-wing lift to the incident site. It is also the primary arrival and trans-loading location for federal resources arriving from DC Hawaii and from commercial vendors.
- **Guam International Airport** is the primary arrival location for resources arriving by fixed-wing aircraft. It is also the departure airfield for resources that are trans-loaded for further movement to Guam. This airport would also serve as the preferred ISB for incoming flights to the Marianas.
- **Anderson AFB** is the secondary arrival and trans-loading location for flights coming from CONUS or OCONUS. This airfield is the primary arrival location for military aircraft. It also serves as home base for rotary-wing assets, where required.





**Figure 3: Shipping Distances to Guam**

**Marine Transportation** – Apra Harbor is home to both the commercial Port of Guam as well as the Guam Naval Base. The approach to Apra Outer Harbor faces west toward the Philippine Sea. Apra Outer Harbor has depths of 44 to 174 feet in its westernmost portion. The channel leading from Outer Harbor to Inner Harbor has a least charted depth of 32.8 feet. Inner Harbor has depths of 29.9 to 44 feet.



**Figure 4: Port of Guam**

All operations in the Outer Harbor are under U.S. Coast Guard (USCG) Captain of the Port (COTP) control. Permission to enter or clear the harbor must be obtained from the USCG COTP Marine Safety Office, which is located at Guam’s commercial port.

Because of the low topography of Apra Harbor, there is insufficient wind break or tidal surge protection. This requires that ships leave the harbor at the threat of storm conditions. Refer to procedures and checklists provided in the USCG *Heavy Weather Plan* when typhoon conditions exist.

### 3.4 Phased Approach to Response

For a successful response to set the conditions for long-term recovery, both incident support and incident management must be coordinated prior to, during, and after a catastrophic typhoon in Guam. For preparedness, Whole Community partners have varying tasks and responsibilities but their individual efforts should be coordinated so all organizations can work together in a joint response operation.

The Conditions of Readiness (COR) scale is predicated on the event of damaging winds impacting Guam, defined as “sustained winds greater than or equal to 39 miles per hour (mph) (34 knots [kt]).” CORs are set by the Guam Homeland Security Office of Civil Defense (GHS/OCD), in coordination with WFO Guam. Additional discussion of Guam’s COR system is presented in the Guam *Comprehensive Emergency Management Plan (CEMP)*.

Organizing operations into phases allows tasks to be grouped into common operating periods. It also facilitates multiple territorial and federal agencies task organizing in support of response objectives and Core Capabilities.

This plan’s time-phased structure aligns with Guam’s COR scale, with three distinct operational phases: Pre-incident, Incident Response, and Sustained Operations.

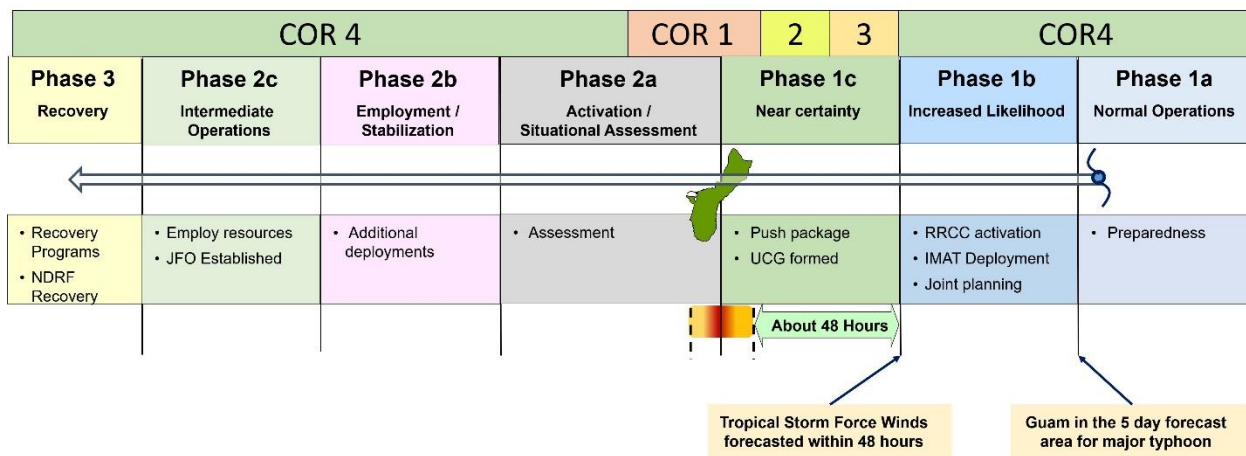


Figure 5: Guam COR Scale and Operational Phases

**Phase 1 (Pre-Incident):** Where there is a major typhoon heading towards Guam, this phase is used to gain situational awareness of existing resource and logistics capabilities, activate coordination/operations centers, alert/activate resources in preparation for response activities, and implement protective measures, as needed.

Phase 1 includes the following sub-phases:

- **Phase 1a (Normal Operations)** – Activities during this phase include day-to-day operations of departments and agencies that may be involved in a unified response to a catastrophic typhoon. These activities include training, planning, exercising, and maintaining situational awareness.
- **Phase 1b (Increased Likelihood)** – Activities during this phase focus on posturing resources to set the conditions for their immediate deployment once the storm passes. These activities include alerting personnel, activating and deploying incident management teams, deploying personnel to gain situational awareness, and beginning joint planning.
  - Deploy Incident Management Assistance Team (IMAT) with selected Emergency Support Functions (ESFs) to the Guam EOC.
  - Activate the Regional Response Coordination Center (RRCC) and National Response Coordination Center (NRCC), as necessary.
  - Alert, activate, and deploy limited resource packages (see Annex C: Operations) to Guam to shelter and stage for immediate deployment post-storm.
  - Alert logistics support elements and teams.
  - Alert Movement Coordination Group in the NRCC.
- **Phase 1c (Near Certainty)** – Activities during this phase focus on joint efforts in preparing to respond to the impacts of the impending storm. At this time, territorial and federal leadership convene in Guam to form the UCG, receive the priorities of response from the Governor of Guam and may request and execute additional pre-positioning or transportation from Honolulu, Hawaii, or CONUS, of critical resources or commodities. The NRCC may push federal resources to Guam and the leadership in Guam must develop an initial deployment and reception strategy. Critical tasks for this phase are:
  - A regional or national IMAT with a federal lead will develop joint situational awareness in coordination with key stakeholders to inform the UCG's decisions regarding response.
  - Operational coordination is established between NRCC and RRCC and EOC.
  - Federal Staging Area (FSA) assets are active and positioned for immediate deployment.
  - ISBs are fully active and push required resources from CONUS and/or Honolulu forward.
  - Appendix C (Operations) has been reviewed and is actively considered in planning response activities.

**Phase 1 End State:** The desired end state pre-impact is to effectively alert, activate, and deploy select commodities, teams, and other resources to Guam and safely stage and/or shelter those resources before impact. Those resources will become available for employment immediately following impact, as directed by the joint organization.

**Phase 2 (Incident and Incident Response):** Once the major typhoon impacts Guam, immediate activities in this phase will focus on life-saving and rescue operations (if there is a requirement). They will transition through activation, deployment, and employment of specialized resources and capabilities, identified through joint planning efforts at the UCG level, and the execution of this plan's appendices (see Appendix C: Operations).

Phase 2 includes the following sub-phases:

- **Phase 2a (Activation, Situational Assessment, and Movement)** – Activities in this phase will focus on stabilization of the situation and developing adequate situational awareness. Critical tasks for this sub-phase are—
  - Operational control and communication between territorial, federal, and private sector response personnel will be established.
  - Supplemental resources that were safely staged or sheltered before the storm will be employed.
  - A coordinated joint information organization will be communicating effectively.
  - The priorities of this phase are—
    - Support lifesaving and life-sustaining missions.
    - Support search and rescue operations.
    - Support provision of emergency medical care to survivors.
    - Support debris clearance needed for access to critical facilities and lifesaving missions.
    - Support the emergency power mission for critical facilities.
    - Support USCG and the Port Authority of Guam (PAG) in critical port assessment activities.
- **Phase 2b (Employment of Resources and Stabilization)** – The IMAT is fully mission capable and ready to assume management responsibilities and transfer functions to a Joint Field Office (JFO).
  - Priorities during this phase are:
    - Support efforts to stabilize the water distribution and wastewater systems.
    - Facilitate the recovery of the marine transportation system.
    - Support the provision of mass care, including sheltering survivors.
    - Support the distribution of essential commodities and initial response resources (IRR).
    - Support the restoration of the power infrastructure.
- **Phase 2c (Intermediate Operations) and Phase 3 (Recovery)** – Activities in these phases focus on transitioning federal support through programmatic recovery operations, guided by appropriate functional plans developed by the joint operation and in accordance with national doctrine.

**Phase 2 End State:** All lifesaving and life-sustaining resources are in place and missions are being successfully completed.

Using the phase construct outlined above, incident support and incident management across the whole community will be coordinated. The physical distance between Guam (located almost 6,000 miles from Oakland, California) and other response facilities (Honolulu, Hawaii; Fort Worth, Texas; Atlanta, Georgia; Washington D.C.) highlights the importance of establishing good situational awareness to inform key decisions, including transportation management, as part of incident support.

Given time-distance considerations, incident management relies on sound preparedness activities, robust information-sharing, and a common understanding of priorities, objectives, tasks, and constraints across the response. These incident management goals are met in the joint execution of this plan.

### 3.5 Key Federal Decisions

Time-distance considerations between CONUS to OCONUS in the making of decisions to place resources on or near the island of Guam must be made well in advance of the storm's forecasted impact.

Some key federal decisions associated with a catastrophic typhoon response include but are not limited to:

- Determine level of response.
- Deploy IMAT and select ESFs in advance of the storm.
- Determine “battle rhythm,” considering the time differences between FEMA headquarters (HQ) and Guam.
- Activate RRCC and Regional Response Coordination Staff (RRCS) to appropriate level.

### 3.6 Key Federal Responsibilities and Tasks

- Time-distance considerations for a Guam response require timely notification, activation, and deployment of federal resources and capabilities.
- Develop Regional Response Plan (RRP).
- Execute Execution Checklist (Appendix X).
- Require that deployed resources and capabilities be self-sustaining for 72-96 hours.

## 4 Administration, Resources, and Funding

### 4.1 Administration

See Guam's CEMP, appropriate territorial law and administrative rules, and the *FEMA Region IX All-Hazards Plan*.

### 4.2 Resources

**Personnel/Administrative Management Responsibilities** – Department and agencies shall—

- Follow established agency policies for personnel augmentation in accordance with statutes, regulations, and authorities; memorandums of understanding (MOUs), the Emergency Management Assistance Compact (EMAC), and mutual aid agreements.
- Ensure employee compliance with parent organization travel policies and procedures for travel and travel reimbursement.

### **4.3 Funding**

The requirements and procedures for disaster response funding are described in the Base Plan of the *FEMA Region IX All-Hazards Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Oversight**

The UCG, using Unified Command principles, is responsible for overall direction and control of joint territory/federal operations in support of field-level operations, subject to the oversight of the leaders identified below.

#### **5.1.1 Territory Leadership**

Guam leadership roles are described in the Guam CEMP. Roles for territory leaders, in addition to senior officials who participate in the UCG, are summarized below.

#### **Governor of Guam**

The Governor leads the territory response to the incident. The Governor sets the priorities for response and recovery in the territory and provides direction to the UCG with regard to the priorities described in the CEMP.

#### **Governor's Homeland Security Advisor**

The Governor's Homeland Security Advisor serves as counsel to the Governor on homeland security issues and serves as a liaison between the Governor's office, GHS/OCD, DHS, and other organizations both inside and outside of Guam. The advisor coordinates with representatives of relevant territory agencies, including public safety entities, the Guam National Guard (GUNG), as well as emergency management and public health officials and others charged with developing preparedness and response strategies.

#### **Civil Defense Administrator**

The Administrator of the Office of Civil Defense ensures that the territory is prepared to deal with large-scale emergencies and is responsible for coordinating the territory response in any major emergency or disaster. This includes supporting local governments as needed or requested and coordinating assistance with the Federal Government.

#### **Governor's Authorized Representative**

This designee is empowered by the Governor of Guam to (1) execute all necessary documents for disaster assistance on behalf of the territory, including certifications for public assistance, (2) represent the Governor of Guam in the UCG, when required, (3) coordinate and supervise the

territory disaster assistance program to include serving as its grant administrator, and (4) identify, in coordination with the Territory Coordinating Officer, the Territory's critical information needs for situational awareness.

### **5.1.2 Federal Leadership**

Federal leadership is described in the NRF. Roles for federal leaders, in addition to federal senior officials who participate in the UCG, are summarized below.

#### **The President**

The President leads the federal response effort and ensures that the necessary coordinating structures, leadership, and resources are applied quickly and efficiently.

#### **FEMA Regional Administrator (RA)**

The RA provides oversight for response and recovery within Region IX, which includes Guam. The RA oversees the initial response within the Region.

#### **Federal Coordinating Officer (FCO)**

Appointed by the President, the FCO is the federal official responsible for coordinating all activities under the Stafford Act.

## **5.2 Communications**

Communications between territory and federal agencies and with other organizations engaged in the response will follow protocols and procedures established for existing territory and federal systems, with any modifications necessary to accommodate the disruptions caused by the typhoon. A detailed analysis regarding communications infrastructure, communications capabilities, and system-specific information can be found in Appendix E.

# **6 Authorities**

## **6.1 Federal Statutes**

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)
- Homeland Security Presidential Directive 5, Domestic Incident Management (February 28, 2005)
- Presidential Policy Directive (PPD)-8, National Preparedness (March 30, 2011)
- National Preparedness Goal (September 2011)
- National Incident Management System (NIMS) (December 2008)
- National Response Framework (NRF) (January 2008)
- Post-Katrina Emergency Management Reform Act (PKEMRA) (2006)
- Rehabilitation Act of 1973
- Americans with Disabilities Act (ADA) (1990)

- Homeland Security Act of 2002 (Pub. Law 107-296, 116 Stat. 2135 (2002) (codified predominantly at 6 United States Code (U.S.C.) §§ 101-557), as amended, with respect to the organization and mission of the FEMA in the DHS Appropriations Act of 2007 (Pub. Law 109-295, 120 Stat. 1355 [2006]))
- The Disaster Mitigation Act of 2000 (Pub. Law 106-390)
- Posse Comitatus Act (18 U.S.C. 1385)
- The Public Health Service Act, (42 U.S.C. § 201, et seq.) (2007)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Oil and Pollution Action of 1990 (OPA-90)
- Pandemic and All-Hazards Preparedness Act (Pub. Law 109-417)
- Americans with Disabilities Act (Pub. Law 101-336)
- Defense Production Act (Pub. Law 81-774)
- Department of Veterans Affairs Emergency Preparedness Act of 2002 (Pub. Law 107-287)
- Disaster Mitigation Act
- Draft Disaster Assistance Policy
- Economy Act (Pub. Law 97-258 and 98-216, as amended)
- Executive Guide to Domestic Incident Management and Support
- Occupational Safety and Health Act of 1970 (Pub. Law 91-596, as amended)
- Pets Evacuation and Transportation Standards Act of 2006 (Pub. Law 109-308)
- Aviation and Transportation Security Act of 2001 (Pub. Law 107-71 and 49 U.S.C. §114)
- Federal Food, Drug, and Cosmetic Act (codified in 21 U.S.C. §§ 301, et. seq.)
- Social Security Act (codified in Title 42 U.S.C. §§ 301, et. seq.)
- Title 32 of the U.S.C.

## 6.2 Territory References

- Guam Organic Act of 1950 (48 U.S.C. § 1421, et seq.)
- Executive Order of the Governor (2005-06)
- Organic Act of Guam, as amended, and related statutes (Chapter 8A Guam, Title 48, U.S.C. § 1422)
- Disaster Relief Act of 1974 (Pub. Law 93-288)
- Guam Government Code §§ 8501-8515 (Pub. Law 1-21)
- Guam Government Code § 62020
- Executive Order of the Governor 91-09 (March 25, 1991)



- Guam Government Code § 40400
- Guam Emergency Response Plan Debris Annex (2005)
- Guam Comprehensive Emergency Management Plan (CEMP) (2013)
- Guam Hazardous Mitigation Plan Guam Disaster Debris Management Plan (draft) (2015)
- DOE Shelter Plan (2013)
- COR Settings Matrix
- Guam Fact Sheets (2013)

### **6.3 Other Related References**

- FEMA Incident Management Handbook (2009)
- Homeland Security Presidential Directive (HSPD)-5 (Management of Domestic Incidents) (February 28, 2003)
- HSPD-7 (Critical Infrastructure Identification, Prioritization, and Protection) (December 17, 2003)
- HSPD-8 (National Preparedness) (December 17, 2003)
- HSPD-20/National Security Presidential Directive-51 (National Continuity Policy) (May 9, 2007)
- HSPD-21 (Public Health and Medical Preparedness) (October 18, 2007)
- National Incident Management System (NIMS) (December 2008)
- National Infrastructure Protection Plan (NIPP) (2007/2008 Update, August 2008)
- National Response Framework (NRF) (January 2008)
- National Preparedness Guidelines (NPG) (September 2007)
- Comprehensive Preparedness Guide (CPG)
- Regional Planning Guide (March 2010)
- DHS Regional Response Federal Interagency Operational Plan (FIOP) (2<sup>nd</sup> Ed., August 2016)
- DHS Regional Recovery FIOP (2<sup>nd</sup> Ed., August 2016)



## Appendix A: Task Organization

### 1 *Situation*

This appendix describes territorial and federal response structures and details actions by phase. In support of incident objectives, unity of effort and efficient resourcing are best accomplished through joint task organization.

### 2 *Mission*

The mission of task organization is to establish a National Incident Management System (NIMS)-compliant joint territorial and federal response structure.

### 3 *Execution*

#### 3.1 *Senior Leaders' Intent*

A joint response organization ensures unity of effort in coordinating disaster response consistent with the priorities set by the Governor of Guam.

#### 3.2 *Concept of Operations*

The Unified Coordination Group (UCG) provides coordination, command, and control, which includes senior officials from both Guam and the Federal Government with jurisdictional or functional authority for catastrophic typhoon response operations. The joint Unified Coordination Staff (UCS) executes response activities under UCG direction, ensuring unity of effort and command.

All responses are local to begin with. The local emergency management official in Guam is the village mayor, who has responsibility for individuals and operations at the village level. When mayors are overwhelmed or resource allocation may be an issue, the territorial government, through the Guam Department of Homeland Security Office of Civil Defense (GHS/OCD), will manage the response at their multiagency coordination center (MACC).

In a catastrophic event, the Federal Government under the Stafford Act, will coordinate response activities on behalf of the Federal Government jointly with the Territory of Guam. The facilities and staff used to accomplish this task organization should be scalable. For more information, see the *FEMA Incident Management Handbook, 2017*.

#### 3.2.1 *Multi-Agency Coordination Centers and Staff*

##### **Guam EOC**

To activate the Guam Emergency Operations Center (EOC), the Governor of Guam, the Homeland Security Advisor, and/or the Guam Homeland Security Administrator issue an activation message indicating the current activation level to the appropriate staff. The Guam EOC is capable of operating 24 hours a day, 7 days a week, but staffing varies based on incident requirements. Capabilities include video and phone conferencing capability. The e911 facility is co-located at the Guam EOC.

EOC responsibilities and products include:

- Coordinating operational communications and resource requests/allocation/tracking
- Collecting, analyzing, and disseminating information related to the event
- Developing a common operating picture, sharing operational information, and providing subject matter experts (SMEs)
- Activating the Joint Information Center (JIC)

The Guam *Comprehensive Emergency Management Plan* (CEMP) details mechanisms through which Guam EOC Emergency Support Function (ESF) teams deploy and support local emergency management activities.

### **Regional Response Coordination Center**

The Regional Response Coordination Center (RRCC) is located in Oakland, California. The RRCC provides primary situational awareness and supports FEMA field operations. The RRCC, as a standing multi-agency response center, is staffed by FEMA personnel, activated ESF representatives, SMEs, and nongovernmental organization (NGO) and private sector representatives (e.g., critical infrastructure liaisons) that provide information and resources and can provide policy guidance and waivers.

This staff is referred to collectively as the Regional Response Coordination Staff (RRCS) and will coordinate with the National Response Coordination Staff (NRCS) activated at the National Response Coordination Center (NRCC), as appropriate.

### **National Response Coordination Center**

Activated by the FEMA Agency Administrator, the NRCC is a Washington D.C.-based MACC that supports field operations at the national level. Movement coordination for a response outside the continental United States (OCONUS), resource allocation, and critical information sharing are key responsibilities and tasks for the NRCS—the emergency management personnel staffing the NRCC.

### **3.2.2 Field-level Operational Facilities and Staff**

#### **FEMA Incident Management Assistance Team**

FEMA deploys its Incident Management Assistance Team (IMAT), pre-impact, to a likely catastrophic event. FEMA does not have to wait for a request from the Government of Guam to do so. The team will integrate with Guam's emergency management structure at the Guam EOC upon its arrival and provide planning support.

Once a federal emergency or Major Disaster Declaration is received, the IMAT along with Guam emergency management staff form the UCS, the staffing element of the UCG. The initial operating facility (IOF) will continue to be the Guam EOC until such time that a temporary federal facility—the Joint Field Office (JFO)—can be established.

## Joint Field Office

The JFO is the incident management facility located in close proximity to the disaster area. It is a temporary federal facility that serves as the primary location for the coordination of federal, territory, private sector, and NGO organization response and recovery activities.

The JFO is scalable and expands, as necessary, to accommodate the context of a particular threat or incident. Personnel from federal and territory departments and agencies, other jurisdictional entities, the private sector, and NGOs may be requested to staff various positions in the JFO, depending on requirements.

## Unified Coordination Group

In a catastrophic event, territorial and federal emergency management officials with jurisdictional or functional authorities and other senior officials will join together to form a UCG. The UCG is responsible for translating the priorities of the Governor of Guam into actionable incident objectives and managing the incident through unity of effort. Other staff within the UCG may include “command staff” such as Safety, External Affairs, Legal, and Liaison representatives. The Territory Coordinating Officer (TCO) and the Federal Coordinating Officer (FCO) lead the UCG.

- **Territory Coordinating Officer** – The TCO is appointed by the Governor of Guam and is the Administrator of the GHS/OCD. As the territorial official responsible for supervising all response activities, when there is a Presidential emergency or Major Disaster Declaration, the TCO will coordinate all federal support.
- **Federal Coordinating Officer (FCO)** – The President appoints an FCO to manage any federal response, recovery, or mitigation operations under the authority of the Stafford Act. The FCO is responsible for all government coordination and for managing the federal response, establishing the JFO, and supporting program delivery.
- **Defense Coordinating Officer (DCO)** – The DCO is the U.S. Department of Defense (DOD) single point of contact within the UCG, providing support under the Defense Support of Civilian Authorities. Any request for a DOD capability is routed through the DCO for validation.

## Unified Coordination Staff

Personnel from territorial and federal departments and agencies, other jurisdictional entities, the private sector, and NGOs may be assigned to the UCS at various incident facilities (e.g., JFO, staging areas, and other field offices). Staff within this structure are known collectively as the “general staff.”

- **Planning Section** – The joint Planning Section is responsible for the collection, evaluation, dissemination, and communication of information about the incident and status of resources. Timely and focused planning in coordination with the Operations Section provides the foundation for effective incident management. The UCS Planning Section develops the Incident Action Plan (IAP) and other functional or future plans on behalf of the joint operation (e.g., transition plans, concepts of operations plans, demobilization plans).

- **Operations Section** – The joint Operations Section validates requirements, tasks, and resources necessary for field operations. It issues capability-based mission assignments (MAs) to other federal agencies (OFAs) involved as federal ESFs during a Stafford Act response.
- **Logistics Section** – The joint Logistics Section provides resource support and logistics management during an incident. UCS Logistics Section activities support field requirements. Movement coordination will occur at the national level (through the Movement Coordination Group) until it can be executed at the field level by the UCS.
- **Finance and Administration Section** –The Finance and Administration Section is responsible for the financial management, monitoring, and tracking of all costs relating to the incident. Due to the nature of cost systems and regulatory requirements, federal and territorial organizations will maintain their separate finance and administration sections. However, for purposes of the UCS, there will be one joint Finance and Administration Section supporting the response. The federal Finance and Administration Section Chief tracks incident expenditures and funding.

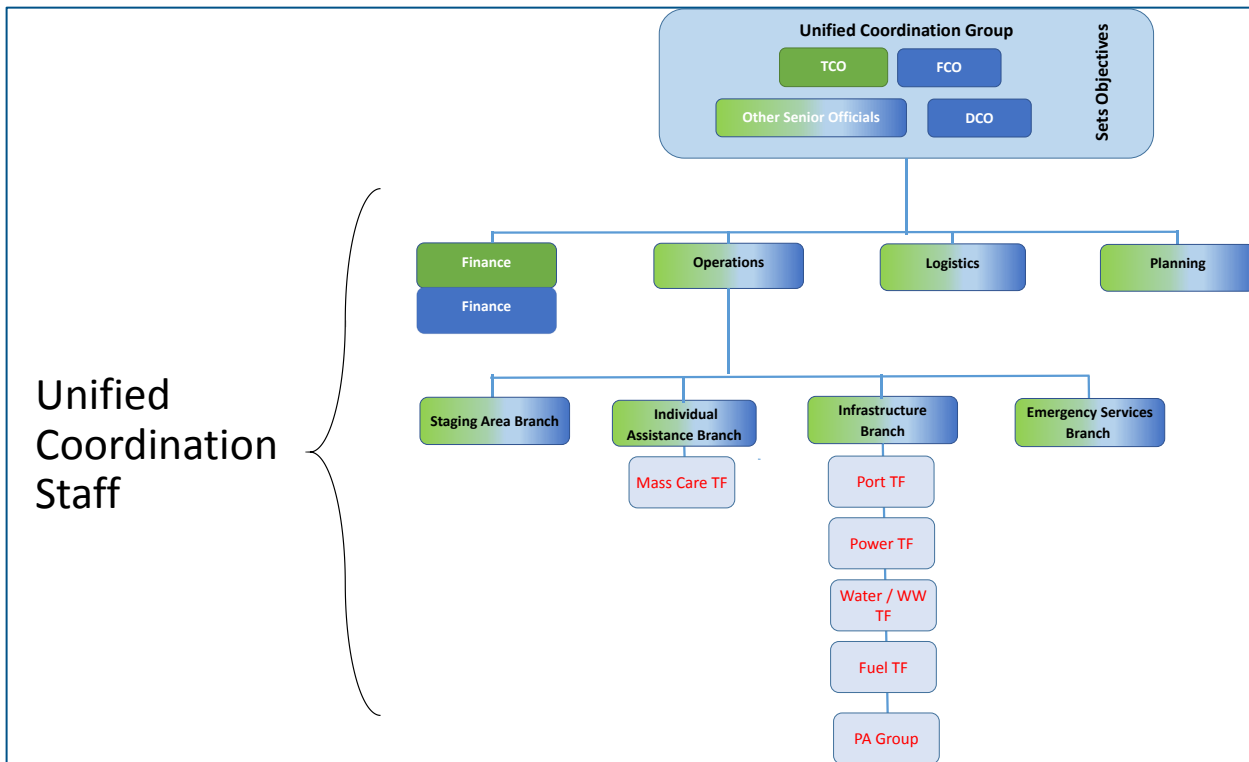


Figure A-1: Joint Response Organization

### 3.2.3 Whole Community

#### Nongovernmental and Voluntary Organization Coordination

NGOs are integrated into the UCS Operations Section. They work alongside ESF/Recovery Support Function (RSF) representatives and are critical to task force operations. Some key NGOs and their roles are listed below:

- **American Red Cross (Red Cross):** The Red Cross (national and local chapters) provides disaster assistance, including food, shelter, bulk distribution of relief items, and emergency first aid care, for responders and earthquake survivors. The Red Cross also provides blood products and supports family reunification effort using both direct and indirect methods. (<https://safeandwell.communityos.org/cms/>)
- **Community Emergency Response Teams (CERTs):** As a local resource, CERT members may be used in a number of support roles to augment emergency operations. Local jurisdictions maintain a listing of certified CERT members and provide training and equipment, where possible, to ensure operational readiness. CERTs activate within their respective neighborhoods to assist with assessments and surveillance, light search and rescue, basic first aid, and road/debris clearance, as requested. They provide some limited assistance and behavioral health support to traumatized individuals.
- **National Voluntary Organizations Active in Disaster (NVOAD):** NVOAD is the forum where voluntary organizations share knowledge and resources throughout the disaster cycle—preparedness, response, and recovery—to help disaster survivors and their communities. One role taken by NVOAD members following a disaster is to help coordinate, receive, manage, and distribute donated goods and services. NVOAD also works with its member organizations to coordinate volunteer efforts. (<http://www.nvoad.org>)
- **Southern Baptist Disaster Relief and The Salvation Army:** These organizations provide assistance (staff and food) with feeding displaced individuals.

#### Private Sector Partnerships

Private sector liaisons may be included within the UCS Operations Section and are critical to task force operations. Private sector partners in response and recovery provide support by—

- Enhancing situational awareness;
- Accessing additional resources; and
- Improving decision making.

A critical public sector partner in Guam is the Guam Hotel and Restaurant Association (GHRA). Most major hotels, restaurants, and on-island mass transportation providers (private tour buses) are members of this association. The association's plan for tourists in the event of a Category 5 typhoon is to have them shelter in place in their hotel rooms.

### 3.3 Phased Approach

Activation, deployment, and employment of these facilities and staff are considered in the phased response. For additional details on incident management positions and functions, refer to the *FEMA Incident Management Handbook*, dated January 2015.

**Table A-1: Response Facility/Staff Operational Focus, by Phase**

Phase	Task Organization Focus	Execution and Responsible Parties
<b>Phase 1a: Normal Operations</b>	Develop and maintain situational awareness	Steady state operations: <ul style="list-style-type: none"> <li>▪ Watch Centers/EOC duty officers</li> <li>▪ Critical Infrastructure/Key Resources (CIKR) Operations Centers</li> </ul>
<b>Phase 1b/1c: Increased Likelihood/Near Certainty</b>	Provide incident support	Activate facilities/coordinate initial actions: <ul style="list-style-type: none"> <li>▪ EOC</li> <li>▪ RRCC</li> <li>▪ NRCC</li> <li>▪ IMAT</li> </ul>
<b>Phase 2: Incident Response</b>	Execute incident management	Establish: <ul style="list-style-type: none"> <li>▪ UCG/UCS</li> <li>▪ JFO</li> </ul>



## Appendix B: Intelligence

### 1 Situation

This plan is based on Guam's history of catastrophic typhoons. Super Typhoon Pongsona in 2002 was one of the worst typhoons to impact the island of Guam. Preliminary damage estimates in 2002 totaled more than \$700 million dollars (a cost of over \$950,000,000 in 2017 dollars). According to the Typhon Vulnerability Study for Guam published in 1999, Guam has the highest risk of being hit by a typhoon of any state or territory of the United States.

#### 1.1 Typhoon History

From 1990 to 2015, 128 named storms occurred that affected Guam, at an average of 3.6 per year. This includes instances where another storm quickly followed a catastrophic storm affecting the island.

Major storms affecting the Marianas typically originate southeast of Guam. While storms may form in the Marianas, they generally move west prior to building in intensity. Figure B-1 **Error! Reference source not found.** shows the tracks of the typhoons that have struck the area between 1990 and 2015.

Typhoons do not have to make "landfall" (the eyewall of the storm passes onto the island) in order to cause significant damage. The National Weather Service (NWS) Weather Field Office Guam (WFO Guam) modeled the storm track, shown in Figure B-2, for this planning effort.

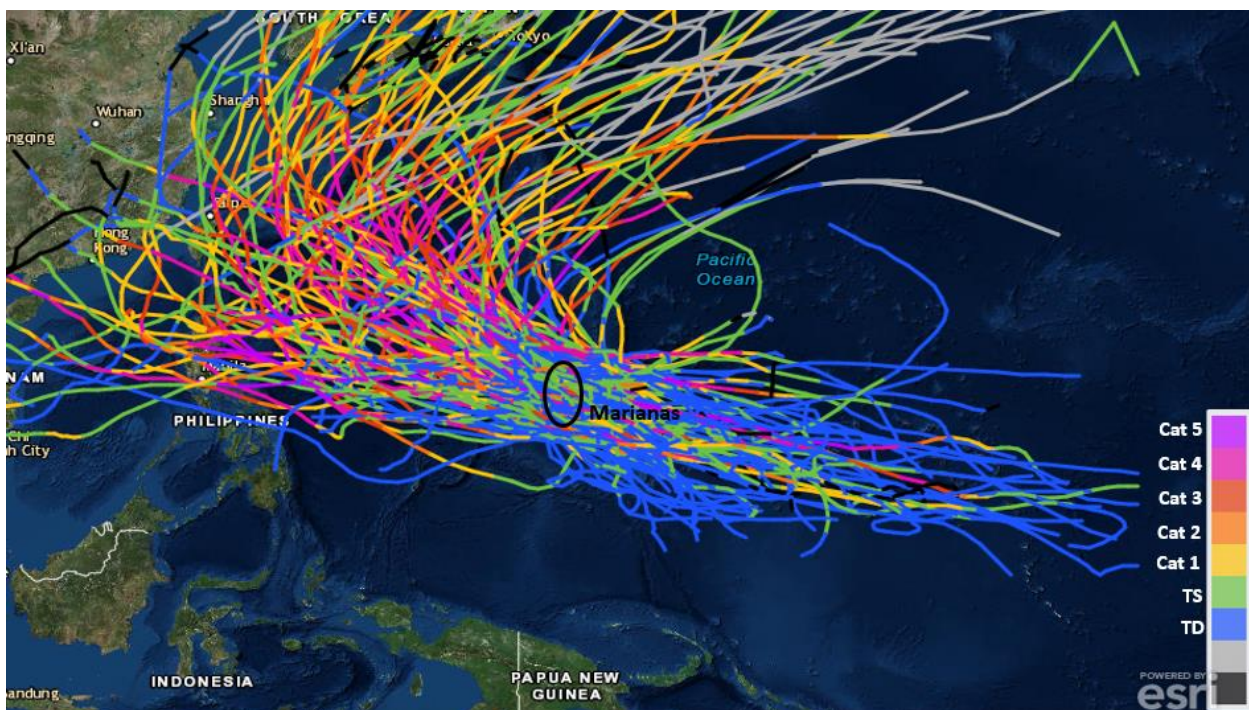
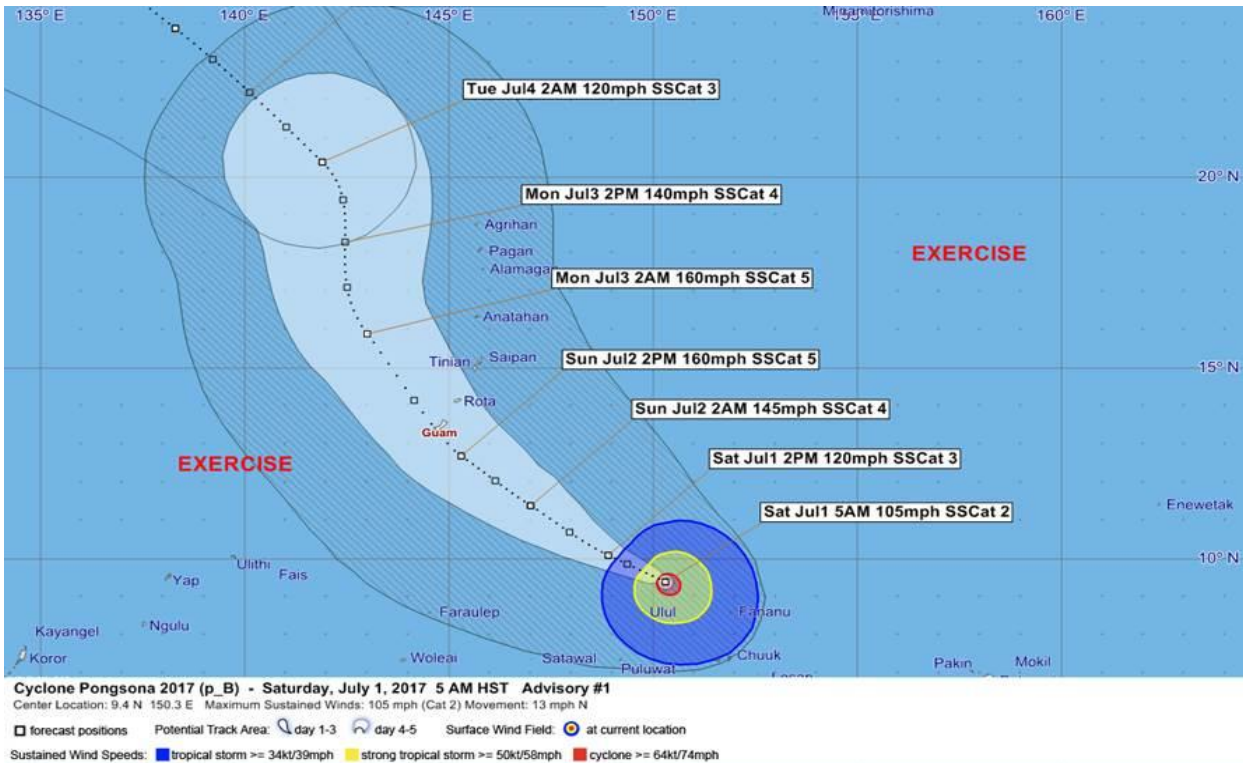


Figure B-1: Guam Typhoon History, 1990–2015



**Figure B-2: Storm Track**

## 1.2 Defining Physical Impacts and Damage Estimates

HAZUS Multi-Hazards (HAZUS-MH) loss-estimates are normally used to estimate impact damage (wind field impact and inundation) specifically to population and critical infrastructure. However, in the Pacific, HAZUS is unable to adequately model the physical impacts of a Category 5 Typhoon on Guam.

For estimates of physical effects and their operational impacts, experiential data generated through NWS damage assessments, surveys, Typhoon Pongsona data, and response planning assumptions were used.

In this plan scenario, the critical infrastructure inundated by the storm includes the Port of Guam, Guam's water and wastewater systems and the power generation and transmission/distribution systems, which are located primarily in coastal inundation zones.

### 1.2.1 Storm Surge

Considerable storm surge and wave run-up are expected to cause coastal inundation/flooding on the west side of the island—from Tumon southward to Umatac—leaving many buildings severely flooded. The combination of a strong storm surge and rough waves will cause considerable beach erosion and severe coastal damage. Elevated seas will prevent river discharge and run-off from leaving the island, causing water to accumulate on coastal plains and exacerbating coastal and inland flooding. Coastal roads and bridges impacted by storm surge will need to be assessed before reopening to the public.

### ***1.2.2 Inundation***

The expected inundation is based on a slight increase of that observed from Typhoon Pongsona, where the maximum storm surge and inundation (height of run-up) was estimated to have been 18 feet at coastal areas on the eastern side of Guam, mostly from swells generated by the approaching storm. To estimate physical damage to critical infrastructure by inundation from the plan scenario, a 20-foot contour line was used to delineate the “inundation zone.” That planning assumption was validated by WFO Guam Meteorologist Charles Guard, author of various studies of storm impacts in the Marianas.

During Pongsona, waves were estimated to have reached 25 to 30 feet on the 50- to 600-foot cliffs of northeast Guam. On western shores, while the waves were not as high due to reduced storm-generated swells, the inundation and impact to the island was greater due to greater urbanization and flatter terrain. Overall, the height of the storm surge and waves on western windward coastlines ranged from 8 feet to 13 feet. Many businesses in Hagatña had standing water as high as 3 to 4 feet. The wave action heavily damaged several sea walls and a few stretches of coastal roadways.

### ***1.2.3 Rain and Flooding***

The expected rainfall in this scenario is based on that of Typhoon Pongsona in 2002. The 24-hour rainfall for that storm registered by the Guam NWS Forecast Office was 19.67 inches. A rain gauge at the University of Guam measured a 24-hour rainfall total of 25.61 inches and a maximum 1-hour rain rate of 6.58 inches. Rainfall from the typhoon in this plan scenario is expected to be heavy across central parts of the island, with some locations receiving nearly 20 inches of rain. Heavy precipitation will cause the Pago and Asan Rivers to overflow, causing extensive damage to roads and bridges. The single water transmission line under Togchok Bridge may be damaged by heavy rain. This water line provides water to the population centers in the north.

### ***1.2.4 Wind***

Sustained winds are expected to be 156-160 mph. The topography of the southern third of the island, with steep mountains and ridges, may accelerate wind speeds.

## **1.3 Determining Operational Impacts and Planning Factors**

### ***1.3.1 Baseline Data***

Applying estimated physical impacts against actual data has resulted in quantifiable operational impacts that serve as the planning factors upon which this plan was built.

Data has been obtained from a variety of sources, including the following:

- U.S. Census data
- Guam Threat and Hazard Identification and Risk Assessment (THIRA)
- Historical data from WFO Guam

**Table B-1: Baseline Planning Data for Guam**

<b>Baseline Planning Considerations</b>	
<b>Total population</b> <i>(Source: 2010 Guam Census Data)</i>	159,378
<b>Average daily visitor census</b> (Guam Visitors Bureau average stay 3 days) <i>(Source: Guam Visitors Bureau average stay 3 days, 2016)</i>	13, 285
<b>Military population</b> <i>(Source: Guam Bureau of Statistics and Plans, 2014)</i>	13, 071
<b>Total population and daily visitors</b>	185,374
<b>Households</b>	
<b>Persons with disabilities</b>	

**Table B-2: Guam Population Impacts**

<b>Guam Population Impacts</b>	
<b>Villages impacted</b>	21
<b>Total population affected (with or without tourist)</b>	159,378
<b>Fatalities Source?</b>	< 5
<b>Injuries (minor/severe) Source?</b>	<10/<5
<b>Residents seeking shelter pre-typhoon (emergency shelters)</b> <i>(Source: 2016 Mass Care Fact Sheet)</i>	8,000
<b>Total population displaced</b> <i>Source: 2016 Mass Care Fact Sheet)</i>	27,343
<b>Population seeking shelter post-typhoon</b> <i>(Source: Planning assumption of at least 10% of the total displaced population)</i>	2,734
<b>Total Households</b>	
<b>average Household Size</b>	3.67
<b>Total Housing Units</b>	50,567
<b>Occupied Housing Units</b>	42,026
<b>Housing units with walls constructed of concrete or concrete masonry units (CMUs) (percentage of total housing Units)</b>	47,471 (94%)
<b>Housing units with walls constructed of metal (percentage of total housing units)</b>	1,434 (3%)
<b>Housing units with walls constructed of wood (percentage of total Housing Units)</b>	1,087 (2%)
<b>Housing units with walls constructed of "other" materials (percentage of total housing units)</b>	575 (1%)

**Table B-3: Infrastructure Impacts**

<b>Infrastructure Impacts</b>	
<b>Power facilities inundated</b> <i>(Source: 2014 Guam Hazardous Mitigation Plan)</i>	14/34
<b>Fuel facilities inundated</b> <i>(Source: 2014 Hazard Mitigation Plan and DOD)</i>	2/2 1/3
<b>Port/airports inundated</b> <i>(Source: 2014 Guam Hazardous Mitigation Plan)</i>	1/3
<b>Communications infrastructure inundated</b> <i>Source: GHS/OCD</i>	0/46



Infrastructure Impacts	
<b>Wastewater facilities inundated</b> (Source: 2014 Guam Hazardous Mitigation Plan)	3/7
<b>Bridges inundated</b> (Source: 2014 Guam Hazardous Mitigation Plan)	3/16
<b>Bridges scour critical</b> (Source: 2014 Guam Hazardous Mitigation Plan)	3/16
<b>Law enforcement/fire facilities inundated</b> (Source: 2014 Guam Hazardous Mitigation Plan)	1/27
<b>Hospitals inundated</b> (Source: 2014 Guam Hazardous Mitigation Plan)	0/3
<b>Debris tonnage generated</b> (Source: USACE Debris Estimate, 2017)	382, 000 cubic yards

Table B-4: Critical Services Impacts

Critical Services Impacts	
Description	Summary of Impact
<b>Days without power</b> (Source: Guam Power Authority [GPA])	90% of power generation restored within 60 days
<b>Days without water/sewer services</b> (Source: Guam Water Authority [GWA])	7 days of boil water orders, post-typhoon
<b>Days without seaport services</b>	7-10 days without basic services, post-typhoon
<b>Days without airport services</b> (Source: Guam International Airport Authority[GIAA])	24-48 hours without passenger service (initially emergency operations via military transport only; estimate for restoration of commercial traffic is 48 hours)
<b>Days required for debris clearance</b> (Source: Guam Department of Public Works [Guam DPW])	24-48 hours for primary roadways

### 1.3.2 Using Typhoon Weather Products

The Joint Typhoon Warning Center (JTWC) is the U.S. Department of Defense (DOD) agency responsible for issuing tropical cyclone warnings for the Pacific and Indian oceans. JTWC products are used by WFO Guam in forecasting typhoon development and issuing advisories and warnings and WFO Guam is the official source of weather information for the joint operations organization.

### Tropical Cyclone Labels

Table B-5: Tropical Cyclone Labels

Wind speed	Label
< 34 knots (nautical miles per hour)	Tropical Depression
34-63 knots	Tropical Storm
64-129 knots	Typhoon
≥ 130 knots	Super Typhoon

## Tracking and Reporting Tropical Cyclones

**Table B-6: Tracking and Reporting Tropical Cyclones**

Level of Cyclone Activity	JTWC Actions	WFO Guam Actions	Time Conducted
No storm activity		<ul style="list-style-type: none"> <li>WFO Guam issues Routine Public Weather Products (ZFPMY)</li> </ul>	0400 1600
No storm activity forecasted for ocean around Guam		<ul style="list-style-type: none"> <li>Routine Marine Weather Products</li> </ul>	
Area of interest where winds may develop >34 knots within 12-24 hours	JTWC issues a Tropical Cyclone Area Formation Alert Bulletin (for invest areas that may develop into a tropical cyclone within 12-24 hours)	<ul style="list-style-type: none"> <li>WFO Guam places graphic on its website showing the forecasted track (up to 5 days out) for Guam</li> <li>WFO Guam issues Special Weather Statement (SPSMY)</li> </ul>	
Storm with winds >34 knots within 5-day track of Guam	JTWC issues a Tropical Cyclone Bulletin (and assigns a Tropical Cyclone Number; e.g., 23W)	<ul style="list-style-type: none"> <li>WFO Guam issues Scheduled Public Advisories (TCPPQ1-5)</li> <li>Discusses storm behavior for next 48 hours</li> </ul>	0800 and 0200 1400 and 2000
		<ul style="list-style-type: none"> <li>WFO Guam issues Intermediate Public Advisories</li> </ul>	1100 and 1700 2300 and 0500
Tropical storm			

### Products

WFO Guam, in conjunction with the JTWC, develops and publishes a number of graphics and text products that provide up-to-date information and analyses of tropical weather/systems that have the potential to affect the Territory of Guam, the Commonwealth of the Northern Mariana Islands (CNMI), the Federated States of Micronesia (FSM), the Republic of Palau, and the Republic of the Marshall Islands (RMI). Several products key to the implementation of this plan are briefly discussed below.

#### *Forecast Advisories*

Forecast advisories contain lists of storm latitude and longitude coordinates, intensity, and system motion. The advisory contains position, intensity, and wind field forecasts for 12, 24, 36, 48, 72, 96, and 120 hours from the current synoptic time. All wind speeds in the forecast advisory are given in knots (nautical miles per hour).

#### *Public Advisory*

The WFO Guam Public Advisory is a plain language product based on the JTWC forecast bulletin. It provides the latest information on tropical storm/typhoon watches and warnings at

least every 6 hours when a tropical cyclone is expected to affect the WFO Guam area of responsibility (AOR) within 48 hours.

### ***Hurricane Local Statement***

The Hurricane Local Statement is a specific impact forecast for islands under a watch or warning, which includes rainfall potential, wind, surf, and storm surge information and recommended preparations.

### ***Tropical Cyclone Update (TCU)***

TCUs notify users of significant changes outside the schedule of the regular public advisories. These are usually based on Doppler Radar reports.

### ***Area Forecast Discussions***

The JTWC Prognostic Reasoning message describes the rationale for the forecaster's analysis, observations justifying the analyzed intensity of the cyclone, and a description of the environmental factors expected to influence the cyclone's future activity. The NWS Guam Area Forecast Discussion further elaborates on local impacts, reasoning, and confidence levels related to watches and warnings.

### ***Typhoon Watches and Warnings***

WFO Guam issues a Typhoon Watch when tropical storm force winds—winds that exceed 38 mph—from an observed cyclone are forecasted to be possible within 48 hours. A Typhoon Warning is issued when tropical storm force winds from an observed cyclone are forecasted to be possible within 24 hours.

### ***Tropical Cyclone Forecast Cone***

The JTWC Forecast Cone is also known as the Area of Potential Gale Force Winds. The area is produced by adding the 34 kt wind radii to the 5-year running mean official forecast track error at each corresponding forecast time. The cone represents the possible track/projection of the center of the tropical cyclone, including the impacts of the 34 kt winds. The cone will naturally be larger than the NWS-produced cone, which only focuses on the average 5-year JTWC error measured from the cyclone center location.

**Table B-7: Saffir-Simpson Tropical Cyclone Scale**

<b>Saffir-Simpson Tropical Cyclone Scale</b>		
<b>Tropical Storm Category</b>	<b>Wind Speed (mph)</b>	<b>Damage at Impact</b>
A	30-49	Damage only to the flimsiest lean-to type structures. Minor damage to banana, papaya, and fleshy trees.
B	50-73	Major damage to huts made of thatch or loosely attached corrugated sheet metal or plywood; sheet metal and plywood may become airborne. Minor damage to structures made of light materials. Moderate damage to banana, papaya, and fleshy trees.

Saffir-Simpson Tropical Cyclone Scale		
Typhoon Category	Wind Speed (mph)	Damage at Impact
1	74-95	Corrugated metal and plywood stripped from poorly constructed or termite-infested structures and may become airborne. A few wooden, non-reinforced power poles tilt and some rotten power poles break. Less than 10% defoliation of trees/shrubs. Green palm fronds begin to crimp or be torn from crowns of trees.
2	96-110	Damage to wooden and tin roofs and other structures with termite-infested or rotted wood. Considerable damage to structures made of light materials. Rotten wooden power poles snap and many non-reinforced poles tilt. Some secondary power lines down. 10-30% defoliation of trees/shrubs.
3	111-130	Extensive damage to wooden structures weakened by termite infestation, wet and dry wood rot, and corroded roof straps and nails. Structures made of light materials may be destroyed. Some roof, window, and door damage to well-built wooden and metal buildings. Air is full of small flying debris. A few hollow-spun concrete power poles broken or tilted and many non-reinforced power poles blown down or broken. Many secondary power lines down. Palm trees begin to lose crowns; 30-50% defoliation of trees/shrubs.
4	131-155	Many well-built wooden and tin structures damaged or destroyed and complete destruction of buildings made of light materials. Extensive damage to non-concrete roofs. Some reinforced hollow-spun concrete power poles and numerous reinforced wooden power poles blown down; numerous secondary and some primary power lines downed; extensive damage to weather heads. Trees/shrubs 50-90% defoliated; trees begin to lose bark.
5	Over 155	Total failure of non-concrete reinforced roofs. Extensive or total destruction to non-concrete residence and industrial buildings. Severe damage to some solid concrete poles, to numerous reinforced hollow-spun concrete power poles, to many steel towers and virtually all wooden poles. All secondary power lines, most primary power lines downed. Considerable glass failure due to flying debris and explosive pressure caused by extreme wind gusts; well-constructed storm shutters fail. Trees devoid of all but largest stubby and sandblasted branches; up to 100% defoliation. Large airborne debris.

Incident support and management both rely on developing, maintaining, and sharing sound information for critical decision making.

## 2 Purpose

The purpose of this appendix is to—

- Provide operators and planners tools that may be used by the joint response organization to develop and maintain situational awareness and increase reliability of information-sharing internally and externally to stakeholders and the public; and
- Provide an understanding of the following:



- Guam’s typhoon history and development of this planning scenario
- Guam’s geography, demographics and critical infrastructure
- Weather products and reports used by Guam in typhoon warning and reporting
- Physical and operational impacts of a catastrophic typhoon
- Guam infrastructure maps

### 3 Execution

#### 3.1 Senior Leaders’ Intent

The joint operation must develop, report, and share critical information in a structured manner so as to produce intelligence that informs response operations decision making.

#### 3.2 Concept of Operations

Using information and tools presented in this appendix, incident support and management personnel collect, analyze, and report critical information in support of decision making for this outside the United States (OCONUS) response.

##### 3.2.1 Situational Assessment

Within 4 hours of an incident, Situation Assessment Core Capability stakeholders must deliver information sufficient to inform decision and/or policy making regarding immediate lifesaving and life-sustaining activities and engage GovGuam and private sector resources within and outside of the affected area to meet basic human needs, stabilize the incident, and transition operations to recovery.

The Situational Assessment Core Capability requires—

- Coordinating information collection/analysis processes with identified stakeholders.
- Collecting and analyzing incoming information from available sources.
- Developing, validating, and accurately disseminating information.

##### 3.2.2 Information Collection Plan

Example of an Information Collection Plan that may be used across the response organization is found in Attachment 1 to Appendix B: Information Collection Plan.

#### Critical Information Requirements (CIRs)

CIRs are critical facts and data decision makers need about capabilities, activities, impacts, accomplishments, or challenges.

**Table B-8: Guam Typhoon Response CIRs**

Critical Information Requirements
Number of casualties (deaths, serious injuries, hospitalizations) of all residents/non-residents resulting from the disaster/emergency
Information on any degradation to information technology (IT) or communications systems critical to the joint response effort and the resulting requirements for restoring those systems

Critical Information Requirements
Lists of activated/deactivated agency emergency operation centers (EOCs)
Information on open/closed airports, seaports, primary road networks, and major lines of communications
Information on damage and restoration requirements for critical infrastructure capabilities (power, water, transportation, resource distribution, cyber, and communications networks)
Lists of opened/closed shelters (emergency and short-term)
Details on evacuation orders for hospitals, nursing homes, and other critical facilities
Information on other events/impacts not captured above that could hinder effective response and recovery operations for the Territory of Guam

### Essential Elements of Information (EIs)

EIs are operationally relevant statements or measures used in supporting decisions making. Using precise EIs and CIRs, incident support and management personnel will be better able to discern and provide relevant and accurate information to decisions makers, the responders, and the public.

**Table B-9: Essential Elements of Information**

Essential Elements of Information		Pre-Impact (Phases 1b-1c)	Post-Impact (Phases 2a-2c)
<b>1.0</b>	<b>Hazard-related Information</b>		
<b>1.1</b>	Boundaries of primary and secondary disaster areas		✓
<b>1.2</b>	Hazardous, toxic, and radiological issues		✓
<b>1.3</b>	Hazard-specific information	✓	✓
<b>1.4</b>	Historical information		✓
<b>1.5</b>	Typhoon forecasts and related information	✓	
<b>1.6</b>	Jurisdictional boundaries		✓
<b>1.7</b>	National Flood Insurance Program (NFIP) impacts		✓
<b>1.8</b>	Predictive impact projections	✓	
<b>1.9</b>	Pre-impact information	✓	
<b>1.10</b>	River forecast and flooding information	✓	✓
<b>1.11</b>	Weather	✓	✓
<b>2.0</b>	<b>Response-related Information</b>		
<b>2.1</b>	Status of declarations	✓	
<b>2.2</b>	Status of ESF activations	✓	✓
<b>2.3</b>	Priorities for response	✓	✓
<b>2.4</b>	Major issues/activities/Mission Assignments (MAs) of ESFs/OFAs	✓	✓
<b>2.5</b>	Resource shortfalls	✓	✓
<b>2.6</b>	Status of key personnel	✓	✓
<b>2.7</b>	Status of reconnaissance operations	✓	✓
<b>2.8</b>	Safety hazards	✓	✓
<b>2.9</b>	Donations/voluntary agency activities	✓	✓
<b>2.10</b>	Upcoming activities	✓	✓

Essential Elements of Information		Pre-Impact (Phases 1b-1c)	Post-Impact (Phases 2a-2c)
<b>3.0</b>	<b>Population Impacts</b>		
<b>3.1</b>	Socio-economic impacts (people)	✓	✓
<b>3.2</b>	Demographics	✓	✓
<b>3.3</b>	Socio-economic impacts (businesses)	✓	✓
<b>4.0</b>	<b>Infrastructure Impacts</b>		
<b>4.1</b>	Security and safety – Status of territory and local operations	✓	✓
<b>4.2</b>	Water and wastewater	✓	✓
<b>4.3</b>	Energy	✓	✓
<b>4.4</b>	Accessibility – Status of transportation	✓	✓
<b>4.5</b>	Accessibility – Status of facilities (schools, shelters, etc.)	✓	✓
<b>4.6</b>	Telecommunications	✓	✓
<b>4.7</b>	Medical	✓	✓
<b>5.0</b>	<b>Critical Services Impacts</b>		
<b>5.1</b>	Political impacts		✓
<b>5.2</b>	Status of EOCs	✓	✓
✓ = Need to gather data for information collection plan (ICP)			

**SWEAT-M**

Used primarily as a graphical representation of the status of critical infrastructure during incident management activities, the “Sewer, Water, Energy, Accessibility, Telecommunications, and Medical (SWEAT-M)” tool should be well socialized across the whole community for their assistance in providing or understanding the joint response’s information requirements.

Services					Water & Sewage		Energy & Fuel		Access – Transport/Transit				Telecommunication
Police	Fire & EMS	Medical	Schools	Stores	Water	Sewage	Energy	Fuel	Air	Sea	Road	Rails	Telecommunication

**Figure B-3: SWEAT Model**

**4 Administration, Resources, and Funding**

See Base Plan of this 2018 Guam Catastrophic Typhoon Plan.

**5 Oversight, Coordinating Instructions, and Communications**

See Base Plan of this 2018 Guam Catastrophic Typhoon Plan.

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## Tab 1 to Appendix B: Information Collection Plan

**Table B-10: Sample Information Collection Plan**

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
<b>Hazard-related Information</b>					
1.1	Boundaries of Primary and Secondary Disaster Areas (inland flooding, etc.)	<ul style="list-style-type: none"> <li>• Geographic locations sustaining damage</li> <li>• Description of extent of damage sustained</li> <li>• Boundaries of areas evacuated</li> <li>• Estimated percent of population evacuated</li> <li>• Estimated percent of population unable to return</li> </ul>	GHS/OCD; predictive modeling; GIS; HAZUS; U.S. Geological Survey (USGS); remote sensing/aerial reconnaissance; assessment teams; Federal Coordinating Officer (FCO) reports; Media/Social Media Virtual Operations Support Team (VOST); drones	<ul style="list-style-type: none"> <li>• Situation reports (SitReps)</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
1.2	Hazardous, Toxic, and Radiological Issues	<ul style="list-style-type: none"> <li>• Are there reported or suspected hazardous material/toxic release incidents?</li> <li>• What follow-up actions are planned or underway? Are there actual or potential radiological incidents?</li> </ul>	Villages, Homeland Security Advisor (HAS))/FCO; Emergency Support Function (ESF) #10; remote sensing; predictive modeling	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
1.3	Hazard-specific Information	<ul style="list-style-type: none"> <li>• Potential/actual coastal erosion</li> <li>• Extent of storm surge</li> <li>• Potential for (or extent of) flooding</li> <li>• Number/estimate of collapsed structures potentially requiring Urban Search and Rescue (US&amp;R)</li> <li>• Potential for other hazards</li> </ul>	USGS; National Weather Service (NWS); ESF #3; ESF #9; ESF #10; U.S. Coast Guard (USCG) Sector Guam	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
1.4	Historical Information	<ul style="list-style-type: none"> <li>• Have previous typhoons of similar magnitude affected the area?</li> <li>• What were the results?</li> <li>• What resources were provided by the Federal Government?</li> <li>• What were the major operational issues?</li> <li>• What were other critical issues?</li> </ul>	After-Action Reports (AARs); SitReps; Status briefings; Incident Action Plans (IAPs); GIS products; Government Accountability Office (GAO)/Inspector General (IG) reports; congressional testimony; media coverage	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefing</li> <li>• GIS products</li> <li>• Special reports/analyses</li> </ul>	
1.5	Typhoon Forecasts and Related Information	<ul style="list-style-type: none"> <li>• Storm track and intensity</li> <li>• Storm surge</li> <li>• Pre-impact imagery</li> <li>• Forecasted wind buffer</li> </ul>	Typhoon Liaison Team (TLT)/Central Pacific Typhoon Center (CPHC); GIS	<ul style="list-style-type: none"> <li>• Text and graphics via fax, email, or posted to TLT website</li> <li>• Update of storm track/other information</li> <li>• Text and graphics of typhoon data</li> </ul>	
1.6	Village Boundaries	<ul style="list-style-type: none"> <li>• Political jurisdictions of affected area</li> </ul>	GIS	<ul style="list-style-type: none"> <li>• GIS products</li> <li>• Jurisdictional profiles</li> </ul>	
1.7	NFIP Impacts	<ul style="list-style-type: none"> <li>• Are there Coastal Barrier Resource System units in the affected area?</li> <li>• Are National Flood Insurance Program (NFIP) non-participating communities in the affected area?</li> <li>• Are repair costs likely to be substantial (exceed 50% of structural value)?</li> </ul>	NFIP Communities List; Community Information System and model projections; Existing Flood Insurance Rate maps; Preliminary Damage Assessment (PDA) and/or inspection teams	<ul style="list-style-type: none"> <li>• Model derived boundaries</li> <li>• GIS products</li> </ul>	
1.9	Pre-Impact Information	<ul style="list-style-type: none"> <li>• Demographics of severe wind/storm surge area</li> <li>• Boundaries of area evacuated</li> <li>• Estimated percent of evacuated population</li> </ul>	Villages; predictive modeling; remote sensing; existing recent photo imagery	<ul style="list-style-type: none"> <li>• Photographs/maps</li> <li>• Interpretive text reports</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
1.10	River Forecast & Flooding Information	<ul style="list-style-type: none"> <li>• Forecasted flooding information</li> </ul>	NWS River Forecast Center; Station Guam web pages	<ul style="list-style-type: none"> <li>• Flood forecasts in nontechnical format</li> <li>• GIS products (maps of areas in which flooding is anticipated along with housing/structure data, inundation areas, and projected road closures/maps of inundation areas with critical facilities)</li> </ul>	
1.11	Weather	<ul style="list-style-type: none"> <li>• Weather forecasts pre- and post-impact</li> </ul>	NWS Station Guam	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> <li>• Weather reports</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
<b>Response-related Information</b>					
2.1	Status of Declarations	<ul style="list-style-type: none"> <li>• Has the Governor declared a GHS/OCD emergency?</li> <li>• Is the Governor’s request normal or expedited?</li> <li>• Status of Regional Disaster Summary and Regional Analysis and Recommendation?</li> <li>• Is there a Presidential declaration and, if so, what type?</li> <li>• What types of assistance are authorized?</li> <li>• Are there special cost-share provisions for Direct Federal Assistance?</li> </ul>	Governor’s Request Letter; Regional Disaster Summary; Regional Analysis and Recommendation; National Emergency Management Information System (NEMIS) entries; Notice of Disaster Declaration	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products (showing declared villages and types of assistance)</li> <li>• Disaster Fact Sheet</li> </ul>	
2.2	Status of ESF Activations	<ul style="list-style-type: none"> <li>• Which ESFs are activated and where are they located?</li> </ul>	Mission Assignment (MA) Logs; Operations Section	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• MA lists</li> </ul>	
2.3	Priorities for Response	<ul style="list-style-type: none"> <li>• What are the territory/federal operational priorities?</li> </ul>	Governor; Unified Coordination Group (UCG)	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• IAP</li> <li>• Regional Support Plan</li> </ul>	
2.4	Major Issues/Activities/MAs of ESFs/Other Federal Agencies (OFAs)	<ul style="list-style-type: none"> <li>• What operations and assessments are agencies conducting under their own authorities?</li> <li>• What MAs have been issued?</li> <li>• What is the status of MAs?</li> </ul>	MA logs; ESF/agency SitReps; functional plans; Regional Response Coordination Center (RRCC); National Response Coordination Center (NRCC); Incident Management Assistance Team (IMAT)	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Displays</li> <li>• IAP</li> </ul>	



EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
2.5	Resource Shortfalls	<ul style="list-style-type: none"> <li>• What are actual or potential resource shortfalls?</li> <li>• What are the anticipated requirements for federal resources?</li> <li>• What are potential or actual federal shortfalls?</li> <li>• What are potential sources for resource shortfalls?</li> <li>• What resources are available and where are they located?</li> <li>• Information priorities - status of the following: SWEAT-M, water and food supplies</li> </ul>	GHS/OCD; UCG; EOC; Logistics reports; assessment team reports; ESF reports; SWEAT-M; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• IAP</li> <li>• Time-phased Force Deployment Lists</li> <li>• Agency/ESF reports</li> <li>• SWEAT-M</li> </ul>	
2.6	Status of Key Personnel	<ul style="list-style-type: none"> <li>• Who and where are the following personnel: Governor; Mayors; Regional Administrator; The Adjutant General (TAG); Governor’s Authorized Representative (GAR); HSA; FCO; IMAT Team Leader; RRCS Chief; UCS section chiefs; key support staff</li> </ul>	Initial Operating Reports; IAP; FCO; HSA	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• IAP</li> <li>• Initial Operating Report</li> <li>• Disaster fact sheet</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
2.7	Status of Reconnaissance Operations	<ul style="list-style-type: none"> <li>• What remote sensing missions have ESFs undertaken under their own authorities?</li> <li>• What aerial reconnaissance missions are being performed at GHS/OCD's direction?</li> <li>• How is information being shared?</li> <li>• What remote sensing missions have been already tasked by the Regional Response Coordination Staff (RRCS)?</li> <li>• What are the available assets to provide remote sensing data?</li> <li>• What format and when will information be available?</li> <li>• Who is providing interpretation of incoming data?</li> </ul>	GHS/OCD, IAP; Operations Section and ESF reports; SitReps; Civil Air Patrol reports; Guam National Guard (GUNG) reports; MA logs	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• IAP</li> <li>• Remote sensing imagery derived products</li> <li>• Text interpretive reports</li> </ul>	
2.8	Safety Hazards	<ul style="list-style-type: none"> <li>• Is there a need for personal protection equipment?</li> <li>• What are the safety hazards in conducting operations?</li> </ul>	GHS/OCD, IAP; assessment team reports; predictive modeling	<ul style="list-style-type: none"> <li>• IAP</li> <li>• Safety briefings/safety messages</li> </ul>	
2.9	Donations/Voluntary Agency Activities	<ul style="list-style-type: none"> <li>• Has a donations hotline been established or is there a need for a hotline?</li> <li>• Which voluntary agencies are actively involved in operations?</li> </ul>	GHS/OCD; Voluntary Organizations Active in Disasters (VOAD); Agency/ESF/Voluntary Agency Liaison (VAL) reports; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> </ul>	
2.10	Upcoming Activities	<ul style="list-style-type: none"> <li>• What is the schedule of daily meetings and briefings?</li> <li>• What other significant events or activities are planned or scheduled?</li> </ul>	GHS/OCD; FCO/HSA; IMAT Team Leader; RRCS Chief; Planning Section Chief	<ul style="list-style-type: none"> <li>• IAP</li> <li>• Daily meeting schedule</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
<b>Population Information</b>					
3.1	Socio-economic Impacts (People)	<ul style="list-style-type: none"> <li>• Number of residences affected</li> <li>• Potential/estimated population affected</li> <li>• Number of shelters open/shelter population</li> <li>• Potential shelter requirements</li> <li>• Unmet sheltering needs</li> <li>• Unmet community needs</li> </ul>	Villages; predictive modeling; GIS modeling; remote sensing/aerial reconnaissance; assessment teams; HSA/FCO reports; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> <li>• VOAD reports</li> </ul>	
3.2	Demographics	<ul style="list-style-type: none"> <li>• Population of impacted areas</li> <li>• Demographic breakdown of population, including income levels</li> <li>• Number/type of housing units in impacted areas</li> <li>• Levels of insurance coverage</li> </ul>	Villages; GIS; predictive modeling; Federal Insurance Administration; hazard mitigation plans	<ul style="list-style-type: none"> <li>• Jurisdiction profiles</li> <li>• GIS analyses</li> </ul>	
3.3	Socio-economic Impacts (Business)	<ul style="list-style-type: none"> <li>• Number and type of businesses affected</li> </ul>	Villages; predictive modeling; GIS; remote sensing/aerial reconnaissance; assessment teams; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• GIS products</li> <li>• Small Business Association (SBA) reports and text items</li> </ul>	
<b>Infrastructure Information</b>					
4.1	Security & Safety - Status of GHS/OCD and Local Operations	<ul style="list-style-type: none"> <li>• Status of police, fire, and EMS</li> <li>• What are the GHS/OCD and local priorities for security and safety?</li> </ul>	EOC; HSA; FCO; RRCS	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
4.2	Water and Wastewater	<ul style="list-style-type: none"> <li>• Status of water supply systems</li> <li>• Status of wastewater systems</li> <li>• Status of water control systems (dams, levee, drainage systems, storm water systems)</li> </ul>	ESF #8 reports; ESF #3 reports; Media/Social Media (VOST)	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
4.3	Energy	<ul style="list-style-type: none"> <li>• Status of electrical power generation and distribution facilities</li> <li>• Status of petroleum storage and distribution facilities</li> </ul>	ESF #3 reports; ESF #12 reports; Media/Social Media (VOST)	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
4.4	Accessibility – Status of Transportation	<ul style="list-style-type: none"> <li>• Status of all modal systems</li> <li>• Status of major/primary roads</li> <li>• Status of critical and non-critical bridges Status of evacuation routes</li> <li>• Status of public transit systems Debris issues</li> </ul>	HSA; FCO; ESF #1 reports; ESF #3 reports; assessment team reports; remote sensing/aerial reconnaissance; predictive modeling; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
4.5	Accessibility – Status of Critical Infrastructure and Facilities	<ul style="list-style-type: none"> <li>• Status of local government facilities and systems, public buildings; government services, schools, and shelters</li> </ul>	SitReps; PDA; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
4.6	Telecommunications	<ul style="list-style-type: none"> <li>• Status of telecommunications services (including Internet) and infrastructure (including towers)</li> <li>• Reliability of cellular service in affected areas</li> <li>• Potential requirements for radio/satellite communications capability</li> <li>• Status of emergency broadcast (TV, radio, cable) system and ability to disseminate information</li> </ul>	HSA; FCO; ESF #2/private sector reports; Radio Amateur Civil Emergency Service (RACES)/Amateur Radio Emergency Services (ARES); Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	
4.7	Medical	<ul style="list-style-type: none"> <li>• Status of medical facilities</li> <li>• Status of home health agencies</li> <li>• Status of EMS systems</li> <li>• Status of VA facilities</li> <li>• Unmet needs</li> </ul>	ESF #8 reports; Media/Social Media VOST	<ul style="list-style-type: none"> <li>• SitReps</li> <li>• Status briefings</li> <li>• GIS products</li> </ul>	

EEI#	EEI Topic	Specific Information Required	Proposed Methodology /Sources	Deliverables	Distribution*
<b>Critical Services Information</b>					
5.1	Political Impacts	<ul style="list-style-type: none"> <li>Status of GHS/OCD and village political situation</li> </ul>	Governor; villages; Legislative branch	<ul style="list-style-type: none"> <li>SitReps</li> <li>Status briefings</li> </ul>	
5.2	Status of EOCs	<ul style="list-style-type: none"> <li>Status of EOCs/Department Operating Centers (DOCs)</li> </ul>	Villages; EOC; ESFs/OFAs; Regional offices	<ul style="list-style-type: none"> <li>SitReps</li> <li>Status briefings</li> <li>GIS products</li> </ul>	

\*Distribution Code: 1 = Governor; 2 = Villages; 3 = GHS/OCD agencies; 4 = UCG; 5 = Ops; 6 = Planning; 7 = Logistics; 8 = Finance/Admin.; 9 = ESFs; 10 = JIC; 11 = RRCC; 12 = NRCC; 13 = Other

**Table B-11: Information Plan – Pre-Impact Assignments/Information Collection Suspense**

EEI #	Description	Responsible Elements				Collection Suspense				
		Pre-Impact (Phases 1b & 1c)	Primary	Support	Support	Support	Within 3 hours of activation	Every O-Period	Within 1 hour following disaster declaration	12 hours prior to impact
<b>Hazard-related Information</b>										
1.3	Hazard-specific Information	ESF #3	ESF #9	ESF #10	ESF #5		✓			
1.5	Typhoon Forecasts and Related Information	NWS	ESF #5				✓			
1.8	Predictive Modeling Impact Projections	NWS	ESF #5	NOAA	MAC		✓			
1.9	Pre-Impact Information	NWS	ESF #5				✓		✓	✓
1.10	River Forecast & Flooding Information	NWS	ESF #5				✓			
1.11	Weather	NWS	ESF #5				✓			
<b>Response-related Information</b>										
2.1	Status of Declarations	GHS/OCD	IMAT	RRCS			✓	✓		
2.2	Status of ESF Activations	ESF #5	RRCS			✓	✓			
2.3	Priorities for Response	GHS/OCD	IMAT	RRCS			✓			
2.4	Major Issues/Activities/MAs of ESFs/OFAs	ESF #5	RRCS	NRCC			✓			
2.5	Resource Shortfalls	GHS/OCD	IMAT	ESF #5			✓			
2.6	Status of Key Personnel	ESF #5	RRCS	GHS/OCD		✓	✓	✓		
2.7	Status of Reconnaissance Operations	ESF #5	RRCS	MAC			✓			
2.8	Safety Hazards	GHS/OCD	ESF #5				✓			
2.9	Donations/Voluntary Agency Activities	GHS/OCD	ESF #5	VOAD			✓			
2.10	Upcoming Activities	GHS/OCD	ESF #5				✓			
<b>Population Information</b>										
3.1	Socioeconomic Impacts (People)	GHS/OCD	ESF #5	ESF #15			✓			
3.2	Demographics	GHS/OCD	ESF #5				✓			
3.3	Socioeconomic Impacts (Business)	GHS/OCD	ESF # 15	SBA			✓			
<b>Infrastructure Information</b>										
4.1	Security & Safety - Status of GHS/OCD and Local Operations	GHS/OCD	ESF #5	ESF #13			✓			
4.2	Water and Wastewater	WWTF	ESF #3	ESF #5	ESF #12		✓			
4.3	Energy	PTF	ESF #3	ESF #5	ESF #12		✓			
4.4	Accessibility – Status of Transportation	DTF	ESF #1				✓			
4.5	Accessibility Status of Facilities (e.g., schools, shelters)	MCTF	ESF #5	ESF #6	ESF#8		✓			
4.6	Telecommunications	GHS/OCD	ESF #2	ESF #7	ESF#9		✓			
4.7	Medical	MTF	ESF #8				✓			
✓ = Need to collect data for Information Collection Plan (ICP)										

**Table B-52: Information Plan – Post-Impact Assignments/Information Collection Suspense**

EEI #	Description Impact (Phases 2a-2c)	Responsible Elements				Collection Suspense
		Primary	Support	Support	Support	Every O-Period
<b>Hazard-related Information</b>						
1.1	Boundaries of Primary and Secondary Disaster Areas	ESF #5	ESF #3	NWS	USGS	✓
1.2	Hazardous, Toxic, and Radiological Issues	ESF #10	ESF #8	ESF #5		✓
1.3	Hazard-specific Information	ESF #3	ESF #9	ESF #10	ESF #5	✓
1.4	Historical Information	GHS/OCD	ESF #5	NWS	RRCC	✓
1.6	Jurisdictional Boundaries	GHS/OCD	ESF #5			✓
1.7	National Flood Insurance Program (NFIP) Impacts	ESF #5	Villages	ESF #3	NWS	✓
1.10	River Forecast & Flooding Information	NWS	NWS	ESF #5		✓
1.11	Weather	NWS	ESF #5			✓
<b>Response-related Information</b>						
2.2	Status of ESF Activations	ESF #5	RRCS			✓
2.3	Priorities for Response	Joint Response Org	JFO	RRCS		✓
2.4	Major Issues/Activities/Mission Assignments (MAs) of ESFs/Other Federal Agencies (OFAs)	ESF #5	RRCS	NRCC		✓
2.5	Resource Shortfalls	GHS/OCD	JFO	UCG		✓
2.6	Status of Key Personnel	Joint Response Org	RRCS	Villages		✓
2.7	Status of Reconnaissance Operations	Joint Response Org	RRCS	MAC		✓
2.8	Safety Hazards	Joint Response Org	ESF #5			✓
2.9	Donations/Voluntary Agency Activities	Joint Response Org	ESF #5	VOAD		✓
2.10	Upcoming Activities	Joint Response Org	ESF #5			✓
<b>Population Information</b>						
3.1	Socio-economic Impacts (People)	Joint Response Org	ESF #5	ESF #15		✓
3.2	Demographics	Joint Response Org	ESF #5			✓
3.3	Socio-economic Impacts (Business)	Joint Response Org	ESF #15	SBA		✓
<b>Infrastructure Information</b>						
4.1	Security & Safety - Status of GHS/OCD and Local Operations	Joint Response Org	ESF #5	ESF #13		✓
4.2	Water and Wastewater	WWTF	ESF #3	ESF #5	ESF #12	✓
4.3	Energy	PTF	ESF #3	ESF #5	ESF #12	✓
4.4	Accessibility - Status of Transportation	DTF	ESF #1			✓
4.5	Accessibility - Status of Critical Infrastructure and Facilities	DTF	ESF #5	ESF #6	ESF #8	✓
4.6	Telecommunications	Joint Response Org	ESF #2	ESF #7	ESF #9	✓
4.7	Medical	MTF	ESF #8			✓
<b>Critical Services Information</b>						
5.1	Political Impacts - Status of Local/GHS-OCD Legislative Branch	GHS/OCD	ESF #5			✓
5.2	Status of EOCs	GHS/OCD	ESF #5	GHS/OCD Agencies	Federal Agencies	✓
✓ = Need to collect data for Information Collection Plan (ICP); NOTE: Initial report/estimates are due within 1 to 6 hours following announcement of "All Clear."						

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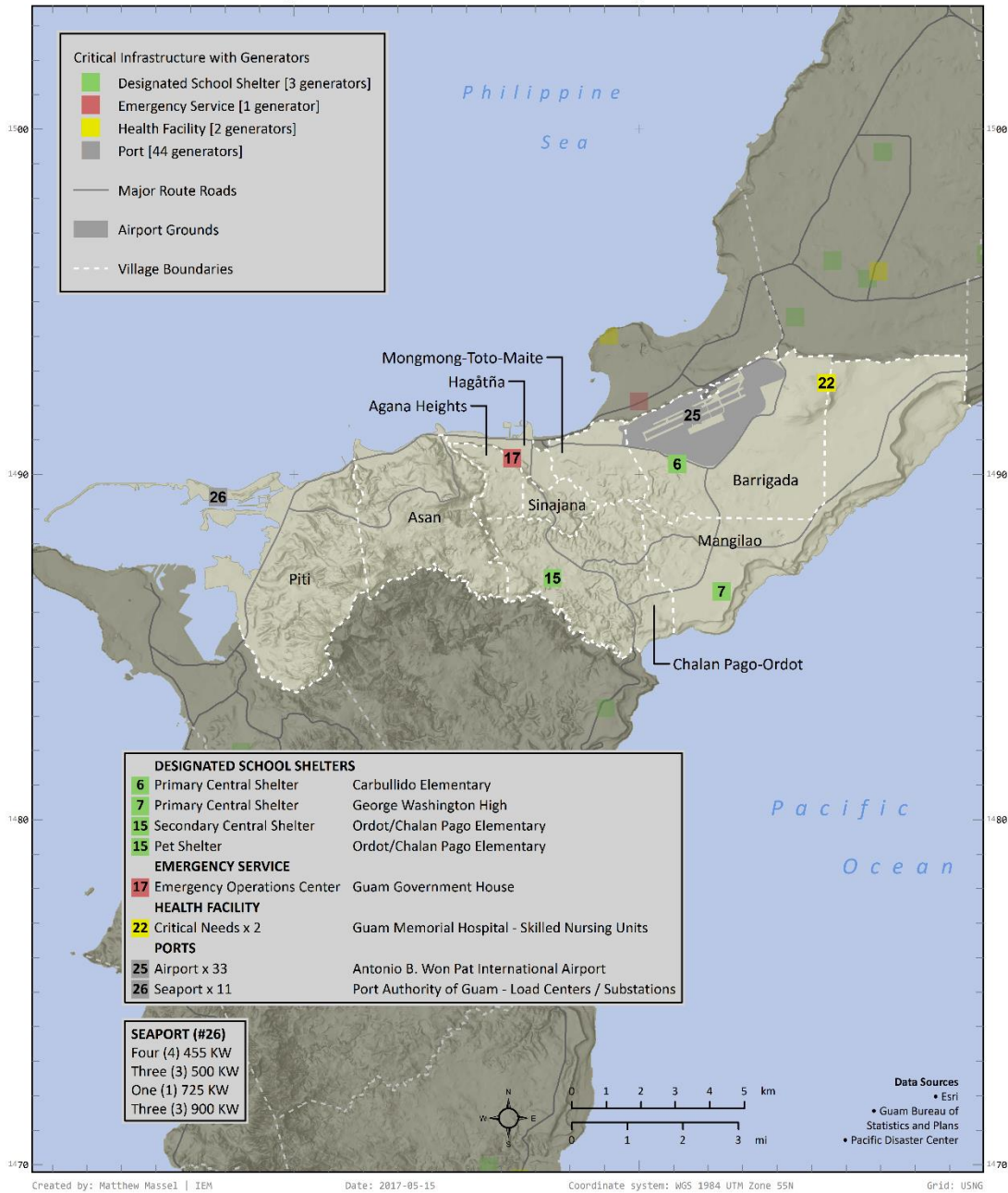


# Appendix B-1: Maps

## Territory of Guam Typhoon Annex

### Critical Infrastructure with Generators - Central Region

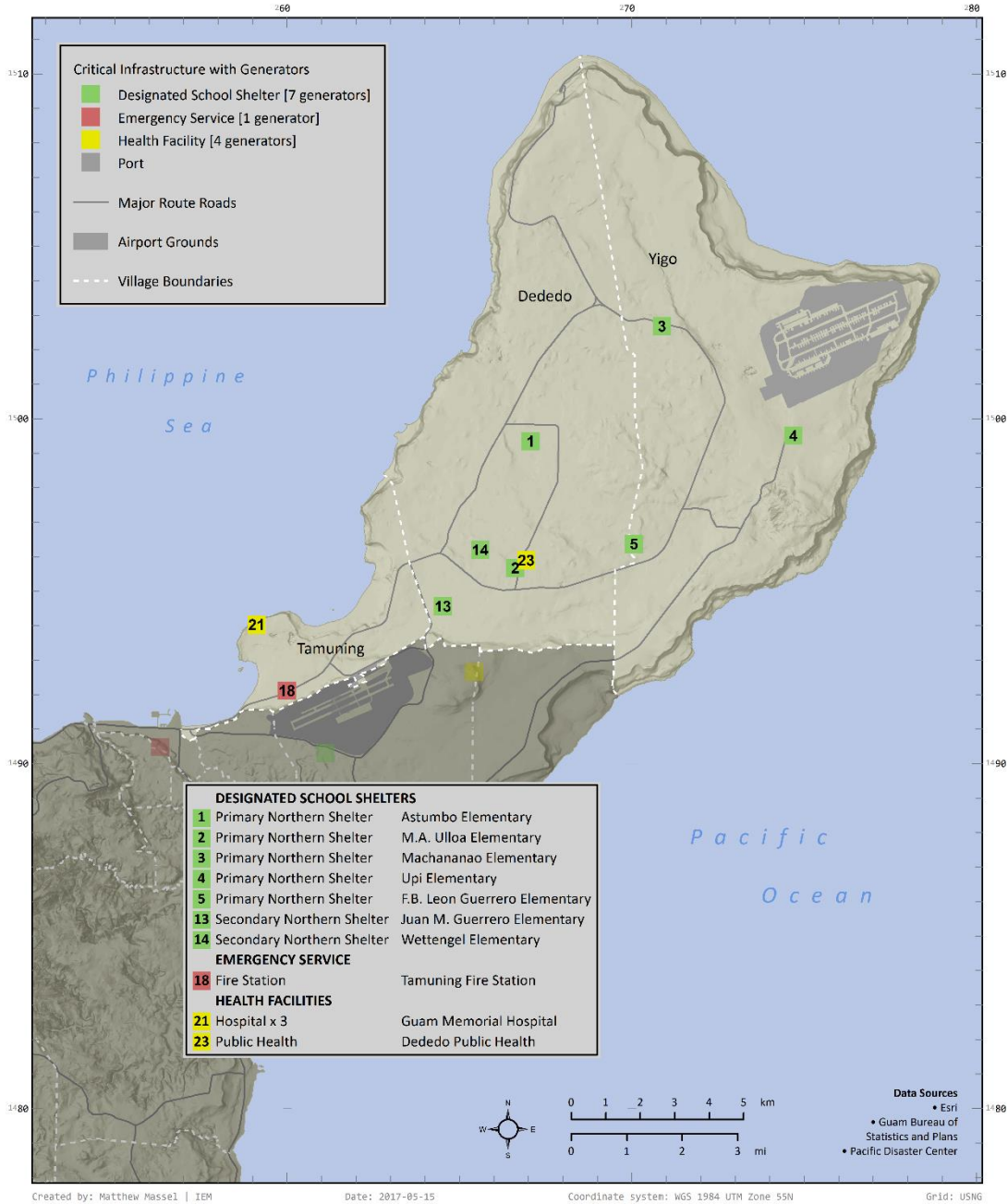
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**Territory of Guam Typhoon Annex**

**Critical Infrastructure with Generators - Northern Region**

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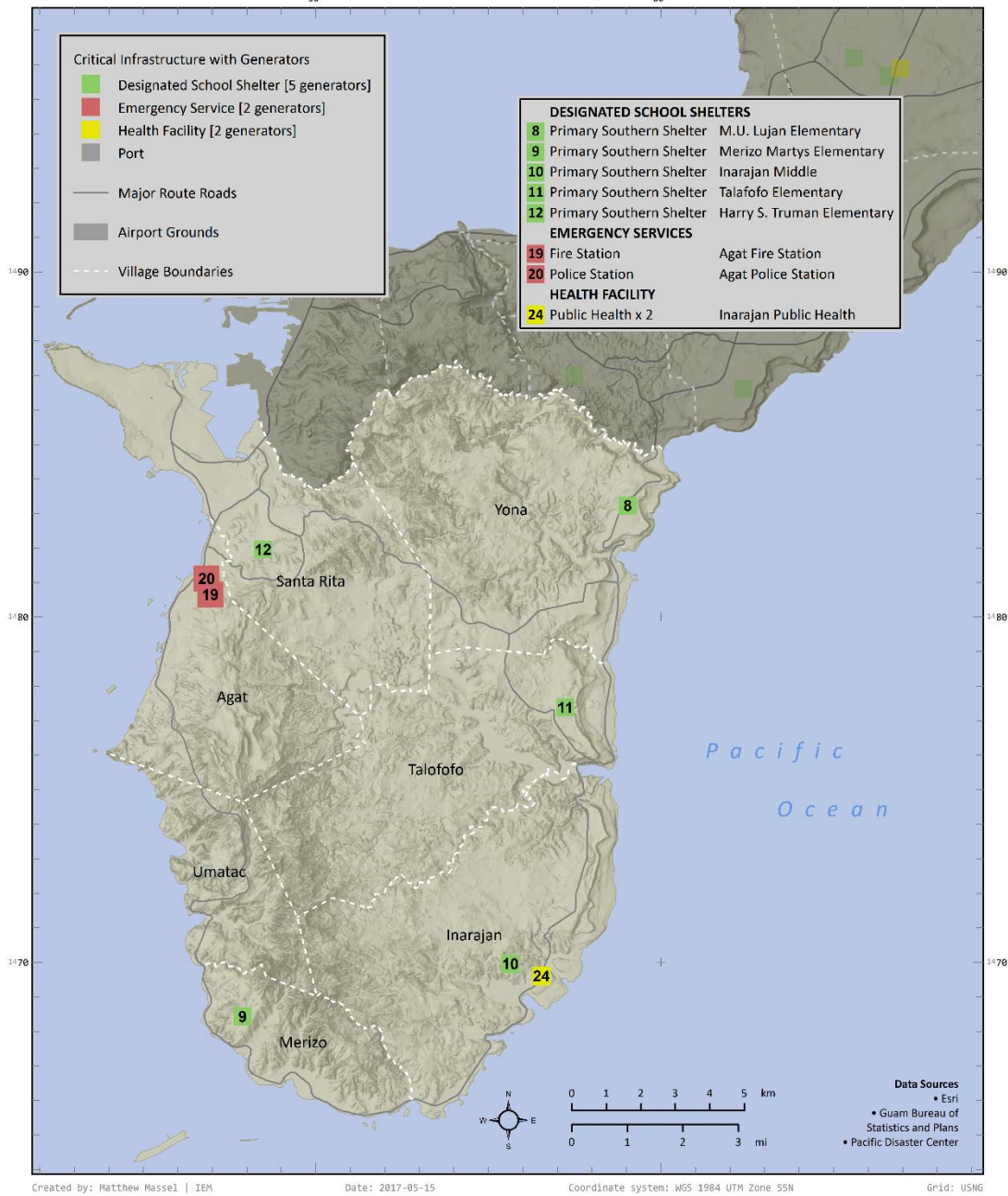


### Territory of Guam Typhoon Annex

#### Critical Infrastructure with Generators - Southern Region

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### Territory of Guam Typhoon Annex

#### Critical Infrastructure with Generators

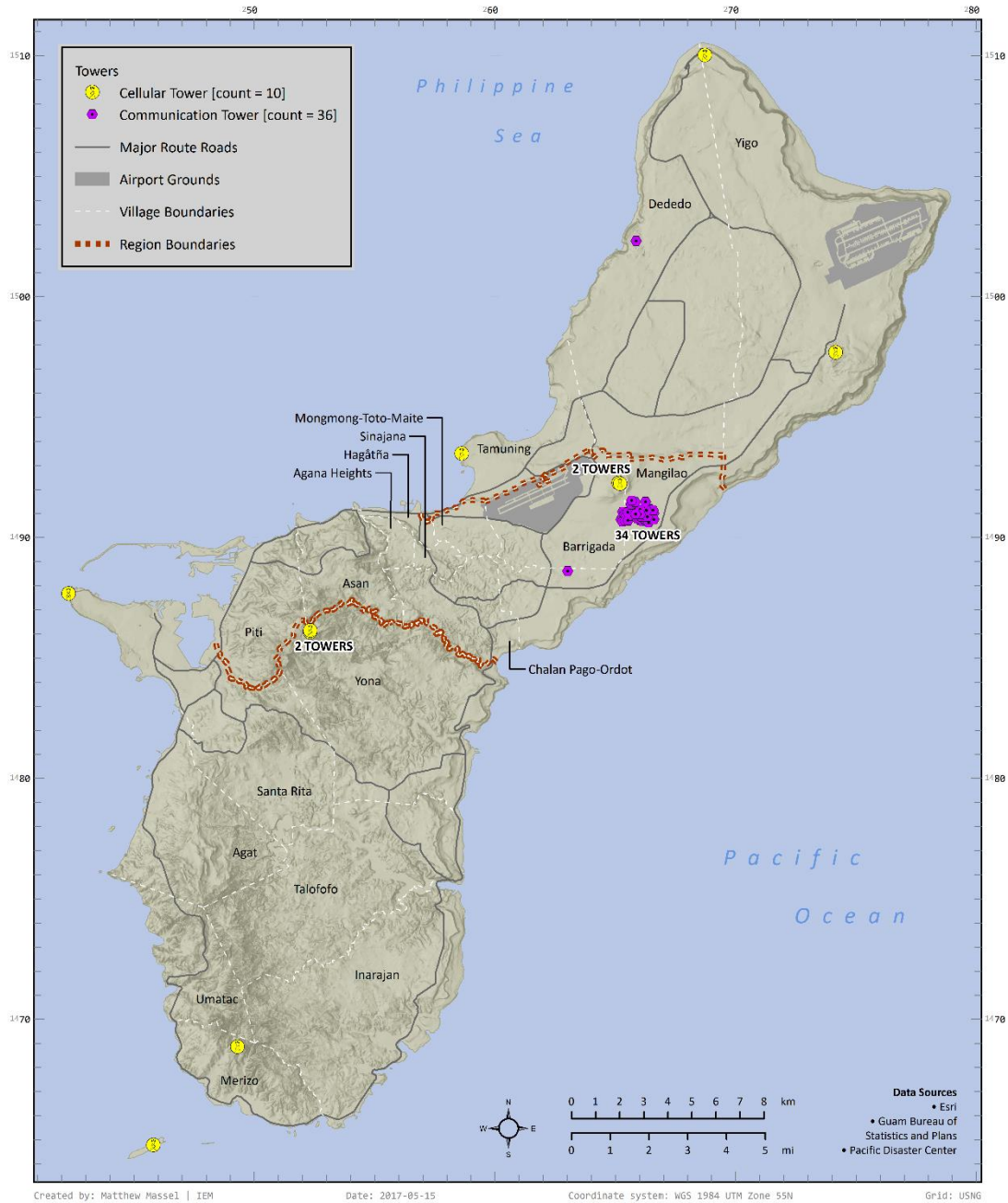
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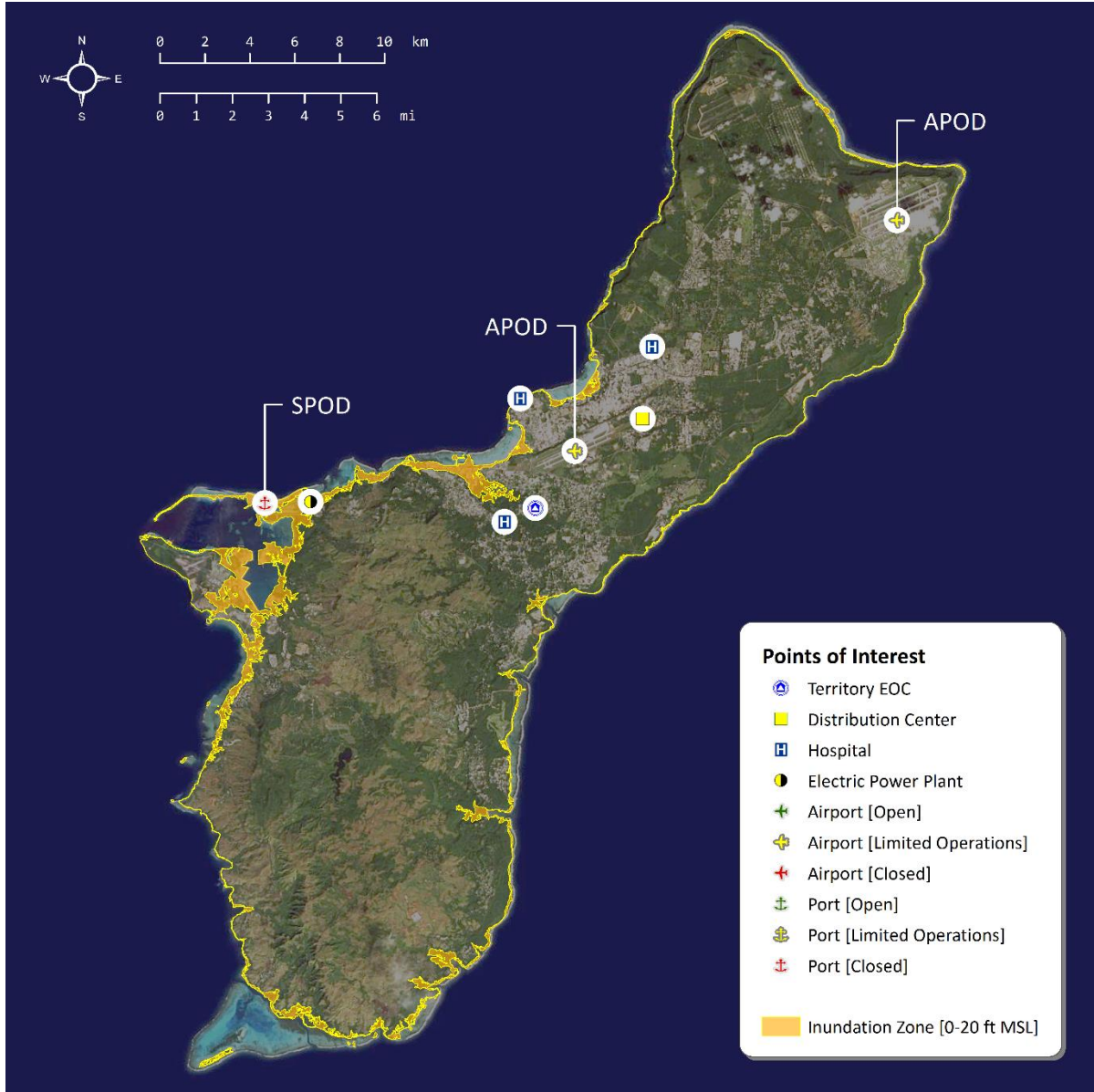


### Territory of Guam Typhoon Annex

#### Communications - Towers

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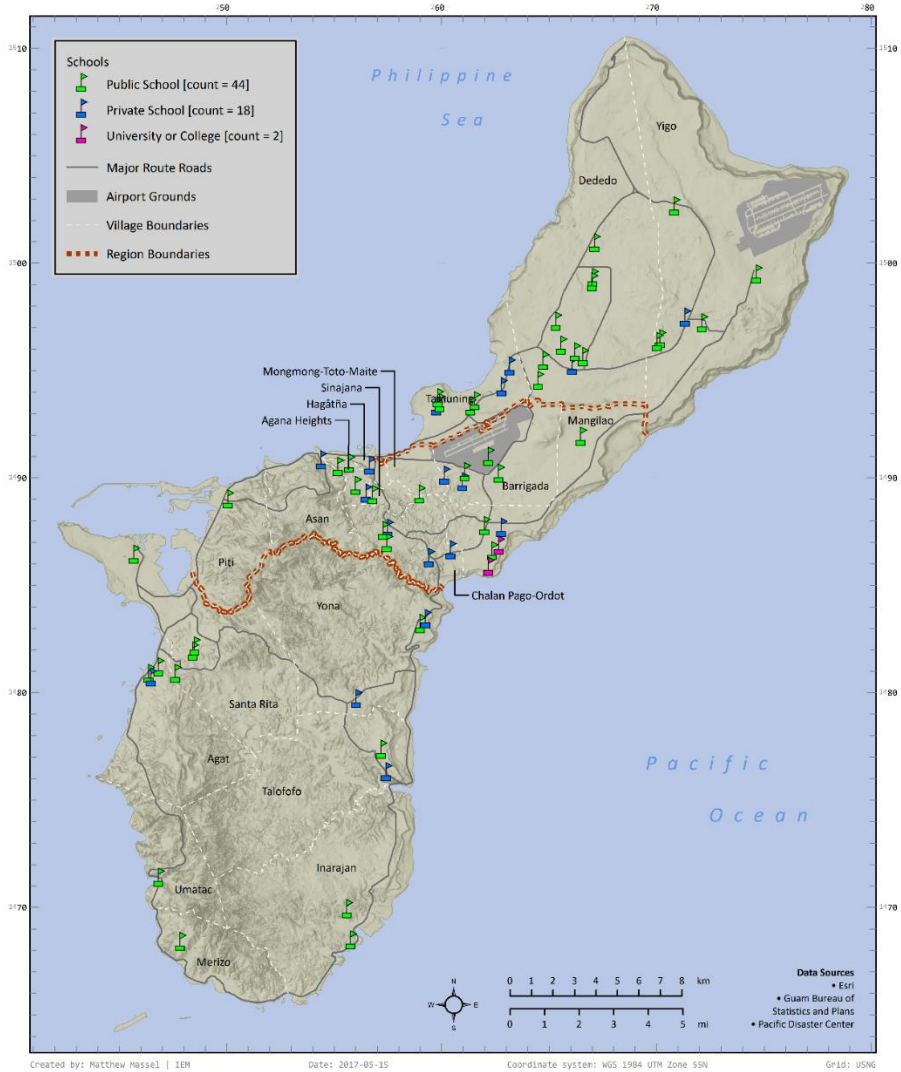




**Territory of Guam Typhoon Annex**

Education - Schools

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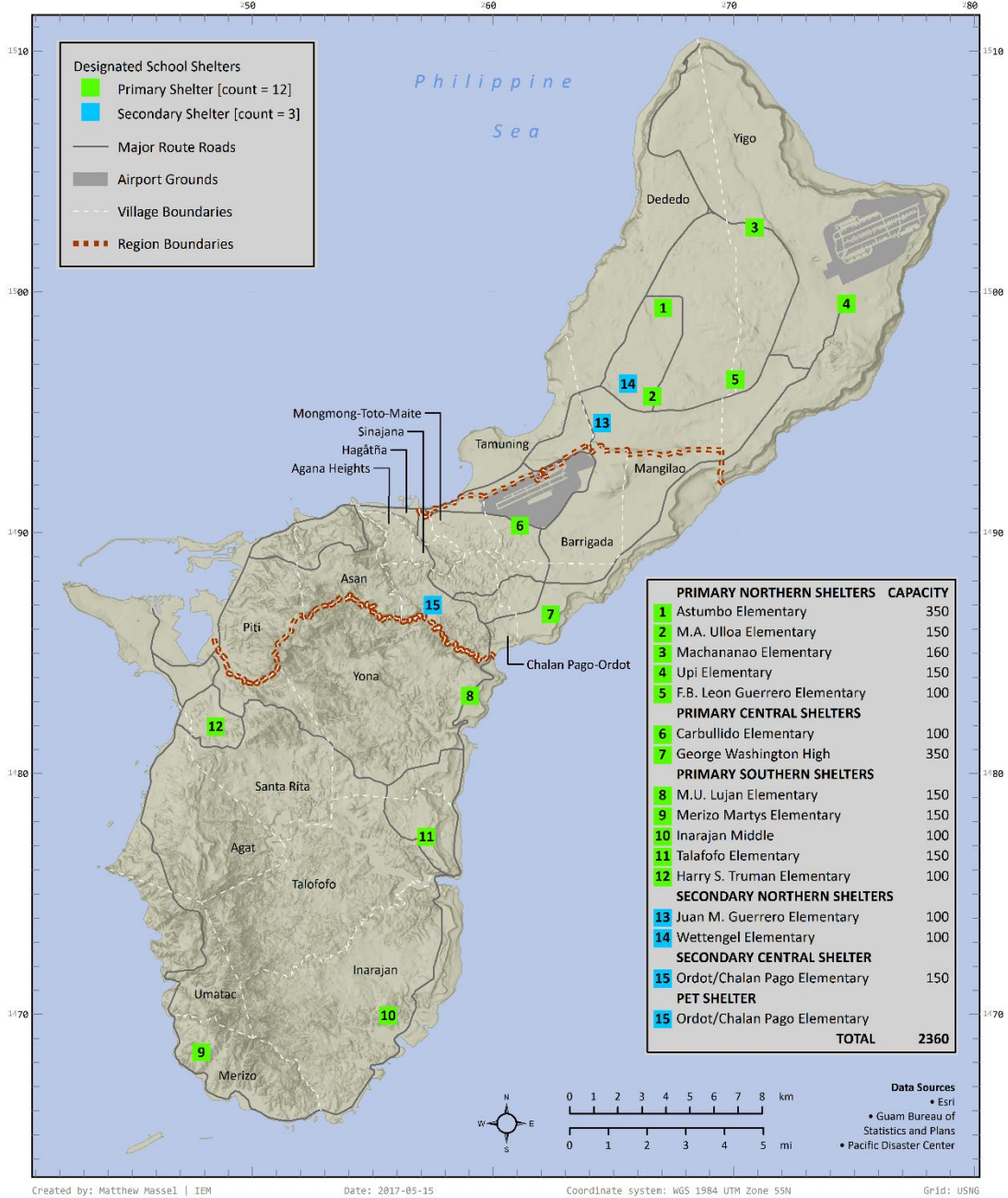




**Territory of Guam Typhoon Annex**

Emergency Services - Designated School Shelters

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Created by: Matthew Massel | IEM

Date: 2017-05-15

Coordinate system: WGS 1984 UTM Zone 55N

Grid: USNG

**Territory of Guam Typhoon Annex**

Emergency Services - Fire Stations

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### Territory of Guam Typhoon Annex

#### Emergency Services - Police Stations

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Created by: Matthew Masse1 | IEM

Date: 2017-05-15

Coordinate system: WGS 1984 UTM Zone 55N

Grid: USNG



### Territory of Guam Typhoon Annex

Geography - Elevation Contours

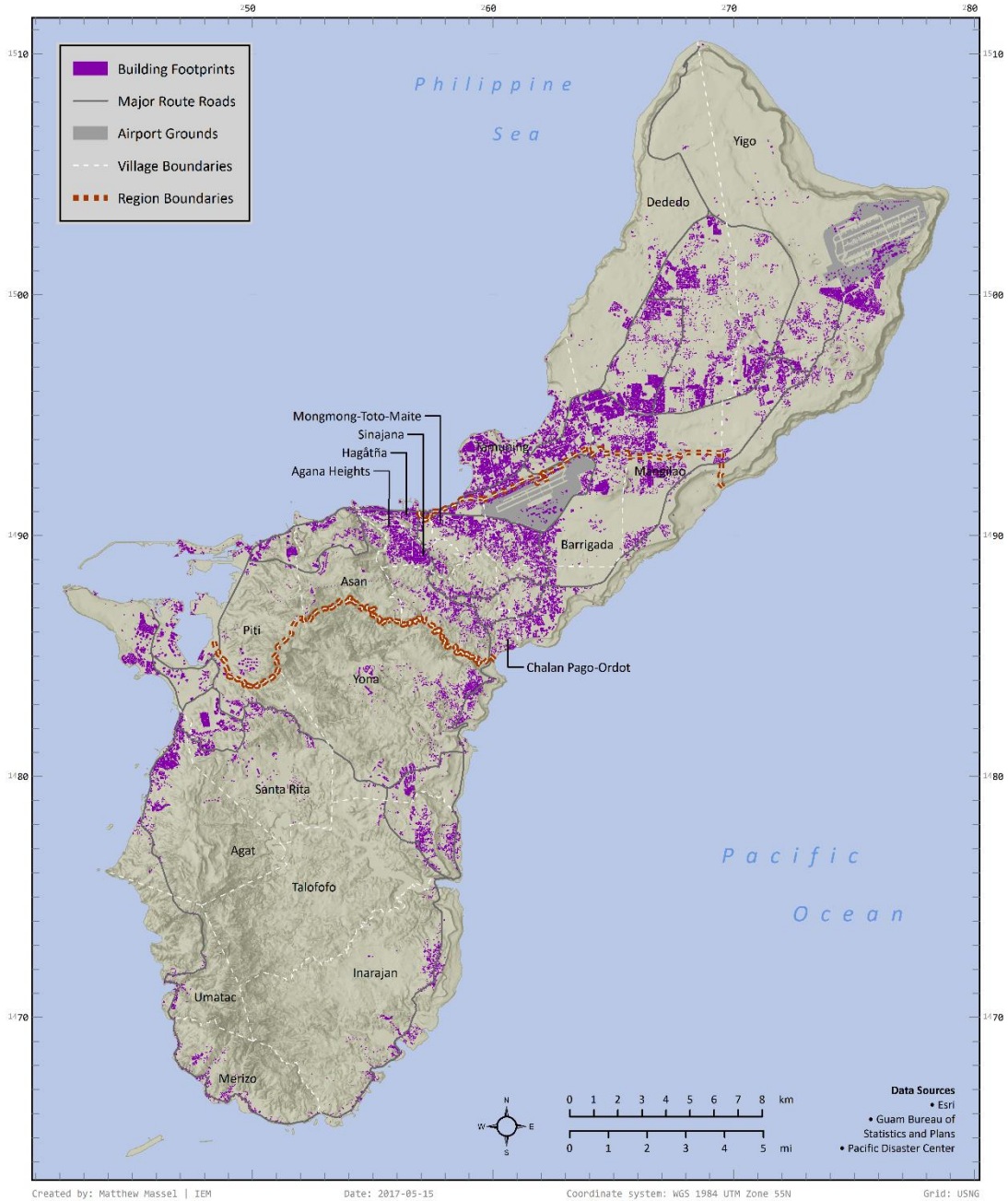
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### Territory of Guam Typhoon Annex

#### Infrastructure - Building Footprints

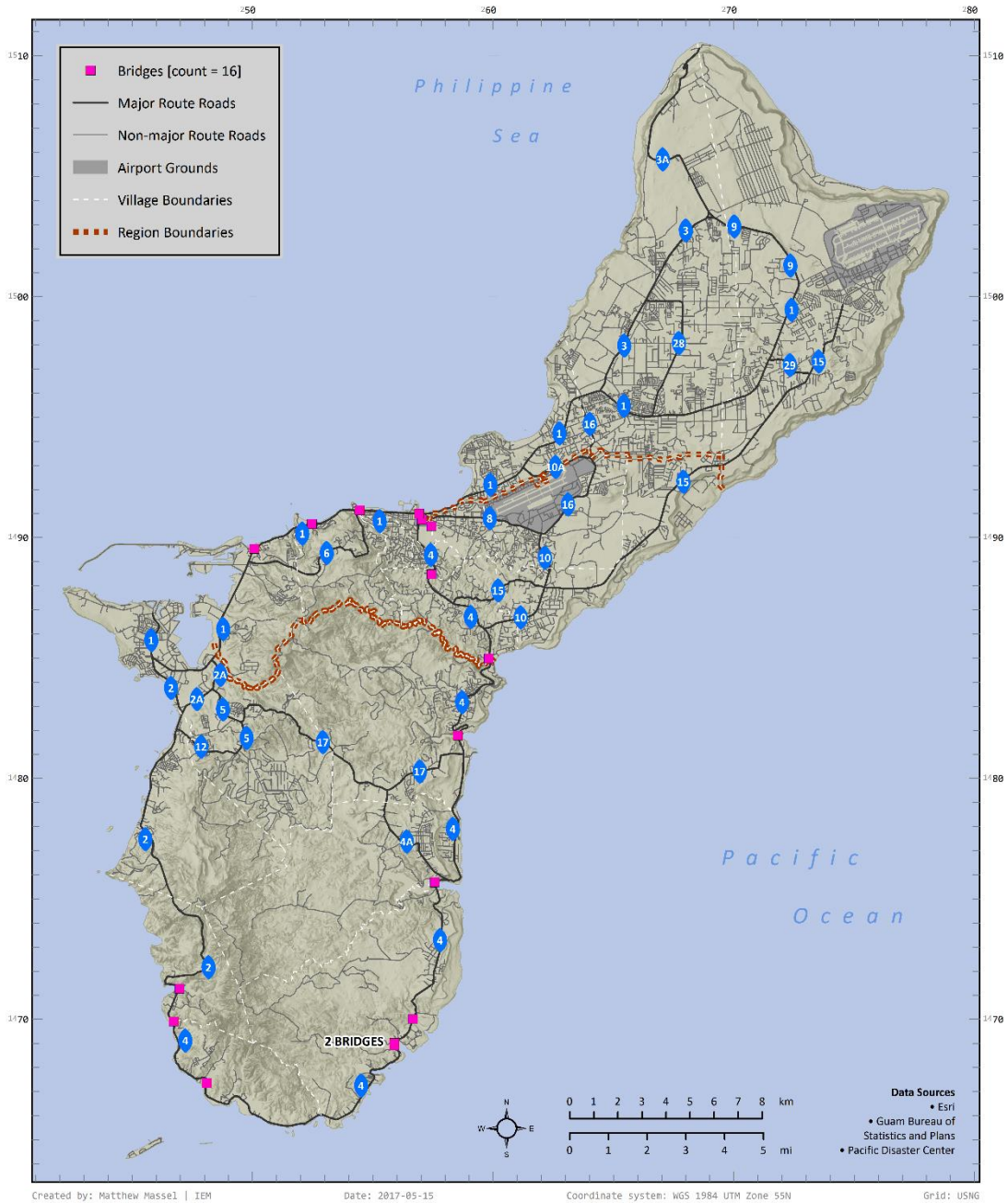
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**Territory of Guam Typhoon Annex**

Infrastructure - Roads and Bridges

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## Appendix C: Operations

### 1 Situation

This annex describes actions for planning, mitigation, response, and recovery from the effects of a catastrophic typhoon impacting the Territory of Guam. Specific strategies and planning assumptions to accomplish the objectives are provided. The concepts and response requirements are scalable to address typhoons of lesser severity and outline tasks and activities required to support and enable a coordinated response.

### 2 Mission

The mission of the joint territory/federal response organization is to save and sustain lives, support the restoration of critical lifeline infrastructure, and assist in re-establishing the commercial supply chain by leveraging organic capabilities and cooperation in Guam and the Commonwealth of the Northern Mariana Islands (CNMI).

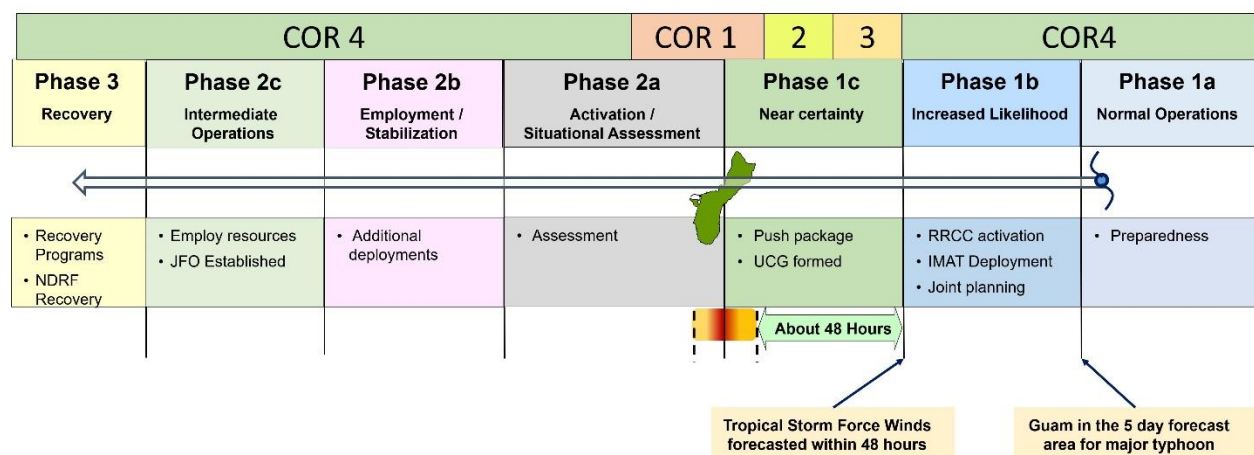
### 3 Execution

#### 3.1 Concept of Operations

Guam Homeland Security/Office of Civil Defense (GHS/OCD) and FEMA form a Unified Coordination Group (UCG) to provide direction and guidance to the Unified Coordination Staff (UCS) in its execution of incident management tasks and activities through a focus on specific objectives.

##### 3.1.1 Phased Response

Organizing operations into distinct time-phases allows tasks to be grouped into common operating periods. It facilitates multiple territorial and federal agencies task organizing in support of incident objectives. The operational phases for this response are illustrated in the graphic below.



**Figure C-1: Guam COR Scale and Operational Phases**

For a review of the phase structure, see Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.



### **3.1.2 Analyze Core Capabilities against Impacts**

Preliminary targets for all response Core Capabilities are presented in the Base Plan. Resourcing those Core Capabilities in the context of a catastrophic typhoon response cuts across all phases of the response and is a Whole Community responsibility. For more discussion on Core Capabilities, refer to the *FEMA Region IX All-Hazards Plan* and the National Preparedness Goal (NPG) Core Capabilities.

### **3.1.3 Review Response Objectives Strategies**

As detailed in the Base Plan, eight response objectives were developed to guide preparedness, initial response, and sustained response operations:

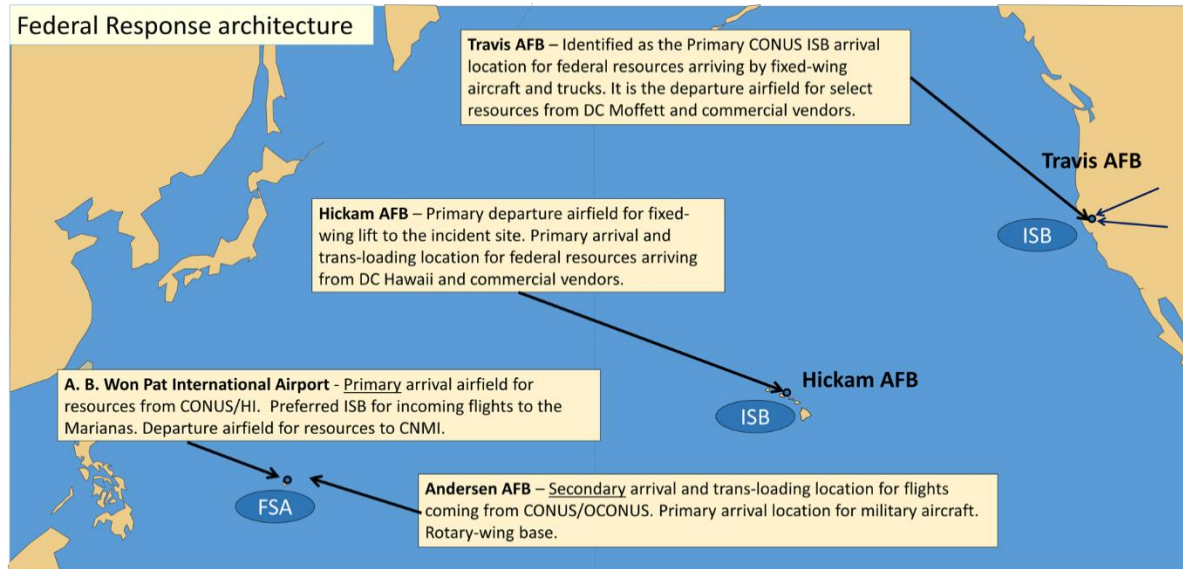
1. Provide emergency power to maintain continuity of essential operations. (Appendix C-1)
2. Restore the power infrastructure. (Appendix C-2)
3. Stabilize the water distribution and wastewater systems. (Appendix C-3)
4. Deliver fuel to maintain continuity of essential operations and services. (Appendix C-4)
5. Conduct mass care services and sheltering of survivors. (Appendix C-5)
6. Facilitate recovery of the Port of Guam. (Appendix C-6)
7. Distribute essential commodities and immediate response resources. (Appendix C-7)
8. Re-establish public health and medical services at critical emergency medical facilities. (Appendix C-8)

## **3.2 Concept of Support**

The support strategy is to alert and deploy select response resources and capabilities during Phase 1b at the direction of the FEMA Regional Administrator (RA). These resources include at a minimum, the Incident Management Assistance Team (IMAT), select Emergency Support Functions (ESFs), and strike teams or other pre-defined force packages.

Critical transportation strategies will be developed in Phase 1b, as part of the Regional Response Plan (RRP). While airlift support is vital and will be used to the extent practicable, sustained response operations require sea lift to maintain essential services and to support survivors. The Port of Guam is the commercial gateway to the rest of the Marianas and other western Pacific locations, processing over 90 percent of all commodities and materiel and is expected to be impacted.





**Figure C-2: Federal Response Architecture**

More specific detail on transportation and logistics requirements are provided in Appendix D.

#### **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

#### **5 Oversight, Coordinating Instructions, and Communications**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

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## Appendix C-1: Provide Emergency Power to Maintain Continuity of Essential Operations

### 1 *Situation*

Restoration of island power is addressed in Appendix C-2: Restore the Power Infrastructure.

It is anticipated that there will be a 100-percent loss of island power. Critical infrastructure such as hospitals, government facilities, emergency shelters, and police and fire departments will require the use of temporary power generation in a prolonged coordinated response. A strategy for restoring island power on Guam is addressed in Appendix C-2. A fueling strategy is presented in Appendix C-4.

#### 1.1 **Background**

Guam is a hardened jurisdiction with many of its residents familiar with and prepared to care for their families in the event of a typhoon. Most residential structures are concrete and have outside kitchens, where cooking with propane is common.

As a service economy with tourism as its biggest industry, Guam has sought to harden its tourist center. In Tumon, all hotels, most restaurants, and many retail stores maintain emergency power generators and Tumon's power transmission and distribution lines are also buried, mitigating loss due to wind damage and allowing for transmission/distribution to be prioritized to the area when island power is restored. Major hotels have large generation capacity and expect to continue to provide services to their guests, even in the event of a typhoon strike.

### 2 *Purpose*

The purpose of this Appendix is to outline how the joint territory/federal response provides emergency power to sustain essential services immediately following a catastrophic typhoon. Operators and Planners identify and employ on-island resources first, supplementing those with federal resources phased in over the response.

### 3 *Execution*

#### 3.1 **Concept of Operations**

The emergency power focus of the concept of operations is to protect and maximize on-island power restoration capabilities and facilitate rapid assessment and restoration of emergency power at priority sites through a Power Restoration Task Force (PRTF) co-led by the Guam Power Authority (GPA) and the U.S. Army Corps of Engineers (USACE) (ESF #3). USACE/ESF #3 and the GPA are activated in Phase 1b. Deployed with the FEMA Incident Management Assistance Team (IMAT), ESF #3 resources include select Prime Power capabilities that are further augmented in Phase 1c.

By deploying these resources early, critical planning and assessments may occur prior to the storm's impact. Assessments will result in a prioritized list of essential services and locations that support transportation, communications, water/wastewater services, medical facilities, and sheltering and also facilitate coordinated emergency power generator installs using on-island resources as part of the immediate response.

The FEMA Distribution Center on Guam (DC Guam) may support initial assessment activities with in-facility resources (96 various generators).

**3.1.1 Critical Considerations**

- USACE has conducted many assessments and has data logged in the Emergency Power Facility Assessment Tool (EPFAT).
- GPA has fueling contracts for its generators.
- GPA manages operations and maintenance for all Guam Waterworks Authority (GWA) generators placed on wells and at wastewater plants.

**3.1.2 Assumptions**

- A 100-percent loss of power island-wide is anticipated due to high winds, flooding, and inundation.
- A 60-day estimated restoration timeline is expected for restoration of island power; long-term emergency power support is therefore expected.
- As a typhoon-hardened community, Guam regularly experiences losses of power in storm events and many residents have home emergency generators.

**3.1.3 Requirements**

- The Guam Homeland Security Office of Civil Defense (GHS/OCD) has developed a critical infrastructure list with existing assessment data on generator status.

**Table C-1-1: GHS/OCD Critical Infrastructure List**

Type of Facility	Number of Locations	Fuel Contract
<b>Governors' Facilities</b>	3	No
<b>Mayor's Offices</b>	21	No
<b>GHS/OCD</b>	1	No
<b>Emergency Shelters</b>	15	Yes
<b>Water Wells / Wastewater</b>	120 /7	Yes
<b>Medical Clinics/Facilities</b>	12	No
<b>Transportation Facilities</b>	Port:1 Airport: 2	Yes

**3.1.4 Applicable Core Capabilities**

- Infrastructure Systems
- Planning
- Operational Communications
- Situational Assessment
- Operational Coordination
- Critical Transportation

- Environmental Response/Health and Safety

### 3.2 Tasks by Phase

Each phase of operations has an end state as shown in Table C-1-2.

**Table C-1-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Joint planning has begun by the activated PRTF co-led by GPA and USACE/ESF #3.
Phase 1c	Priorities for emergency power have been identified and validated by GHS/OCD and requests for Emergency Management Assistance Compact (EMAC) have been made.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the PRTF actively executes priority actions set by the Unified Coordination Group (UCG).
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	PRTF operations transition to GPA; ESF #12 co-leads; maintenance plan in place with less than 10 percent “new” installs.
Phase 3	PRTF operations transition to GPA and ESF #12 recovery activities.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- Identify, collect, analyze, and maintain data to support decision making for the response to a Category 5 typhoon impacting Guam.
- Establish awareness, operational coordination, and communications with critical response partners in preparedness activities.

#### Critical Considerations

- GPA, under a memorandum of agreement (MOA) with GWA, operates and maintains all emergency generators at wells, pumps, and lift stations.
- GPA has its own fueling contract.
- GHS/OCD does not have an emergency fuel contract in place. For more discussion on fueling, see Appendix C-4.
- GHS/OCD and GPA maintain different lists for priority restoration/essential services.

#### Primary Actions

- Maintain awareness of critical facilities and essential services that will require emergency power during a Category 5 typhoon.
- Identify EMAC resources that may support Guam in response activities.

- Validate critical information requirements (CIRs) required by senior leaders for their decision making following a Category 5 storm impacting Guam.
- Develop, maintain, and exercise memorandums of understanding (MOUs)/MOAs that include emergency power coordination provisions.
- Establish communications and coordination with the government of the Commonwealth of the Northern Mariana Islands (CNMI). The CNMI island of Rota is approximately 45 nautical miles from Guam and is likely to experience some storm impacts due to its proximity.
- Exercise operational coordination structure with GPA and GWA during preparedness activities.

### **3.2.2 Phase 1b (Increased Likelihood)**

#### **Operational Focus**

- ESF #3 and select resources deploy with IMAT and initiate joint planning activities.
- Deploy sufficient emergency power personnel and resources pre-storm to conduct priority emergency power assessments (10-15 assessments per day) and installations.

#### **Critical Considerations**

- Planning by PRTF must be coordinated and include logistics support.

#### **Primary Actions**

- GPA increases vegetation control activities around power lines.
- GPA and GHS/OCD conduct survey of emergency power generators for essential services.
- GPA top off fuel at water system generators in accordance with MOA between GPA and GWA.
- PRTF gains and reports the status of all GHS/OCD facilities identified as critical infrastructure.
- GPA executes its typhoon standard operating procedures (SOPs) and preparedness checklist.
- GPA activates and recalls essential personnel (by position) in order to perform preparedness activities.

### **3.2.3 Phase 1c (Near Certainty)**

**Operational Focus:** Complete preparation for immediate response activities, focusing on communications and situational awareness and the safeguarding of necessary resources in anticipation of the storm.

**Critical Considerations**

- Bucket trucks and other field resources have no protected parking area and could be subject to storm damage (flying debris, inundation, flooding).

**Primary Actions**

- GHS/OCD and ESF #3 activate the PRTF and begin joint planning activities.
- GHS/OCD define Government of Guam (GovGuam) fuel requirements for emergency power and provide information to the Fuel Task Force (FTF).
- GPA and GWA start emergency generators at well locations to ensure service post-storm.
- FEMA activate and deploy additional Prime Power resources from the continental United States (CONUS) to support the Unified Coordination Staff (UCS) in Guam.
- Perform pre-install inspections at priority locations.

**3.2.4 Phase 2 (Incident and Incident Response)**

**Operational Focus:** Install, operate, and maintain emergency power generators at essential services locations and critical facilities.

**Critical Considerations**

- There are over 250 individual locations currently identified on Guam's essential services/critical facilities list. These locations have varying fuel requirements ranging from 48 hours to 5 days. See Appendix C-4.
- Ground transportation of emergency power generator sets may require federal assistance.
- Operations and maintenance of various types and kinds of generators require tailored support packages.
- Hotels/restaurants have priority emergency fuel contracts.
- There are limited fuel delivery vehicles commercially available.

**Primary Actions**

- PRTF collect and maintain situational awareness information regarding emergency power requirements at priority locations.
- GPA coordinate, monitor, and report the status of GPA power assessment operations through the PRTF to the joint operational organization.
- GPA define and report priority restoration efforts and any federal requests for assistance.
- PRTF coordinate with ESF #7 to source transportation resources.

### **3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)**

#### **Primary Actions**

- Develop, brief, and receive approval from the UCG that essential services and critical facility locations are in alignment with the Governor's priorities.
- Execute approved plan.
- Coordinate resupply with ESF #7 of maintenance items for emergency power mission.
- Deploy GPA Power Assessment Teams to assess damage to power infrastructure. These teams will be deployed in advance of debris clearance activities. Personnel involved in debris clearance activities are instructed to remain clear of and report any downed power lines, should they be encountered during debris operations, to the PRTF, which will coordinate with the GPA Operations Center.
- Coordinate and share situational awareness information developed by assessment teams.
- Guam Department of Public Works (DPW) conducts priority route debris clearance operations to ensure resources and capabilities can deploy to critical facilities.
- Integrate ESF #12 into PRTF and begin island power restoration planning.
- PRTF and FEMA will coordinate the deployment of ESF #3, ESF #12, and FEMA Operations staff to assist in technical assessments of generator requirements and to assist in the installation of emergency generators, as needed.
- PRTF coordinates with the GPA Incident Command Post (ICP) to ascertain the status of ongoing GPA power restoration operations and to establish power restoration priorities with the UCG.
- PRTF supports GPA asset replacement ordering to enable the timely repair and restoration of emergency power capabilities until island power is restored.
- GHS/OCD coordinates the mobilization and deployment of available Guam National Guard (GUNG) generators based on generator type/kind/capability, as needed, to augment emergency power availability or to replace failed generators.
- PRTF coordinates with ESF #7 and ESF #3 to source and lease available on- or off-island generator assets, as needed, to augment emergency power availability or to replace failed generators.
- PRTF coordinates augmentation of GPA resources by mobilizing any available GUNG assets, mission assigning the U.S. Department of Defense (DOD) for support, and/or executing MOUs with off-island power agencies.
- ESF #7 coordinates with the PRTF to source transportation resources and provide logistical support for moving off-island assets to Guam.



### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

#### **Primary Actions**

- PRTF coordinates emergency power generation installations as required and/or directed.
- PRTF supports GPA asset replacement ordering to enable the timely repair and restoration of emergency power capabilities until island power is restored.
- ESF #7 coordinates with the PRTF to source transportation resources and provide logistical support for moving off-island assets to Guam.

### **3.2.7 Phase 2c (Intermediate Operations)**

#### **Primary Actions**

- PRTF coordinates daily accountability for the joint operation of generator install and de-install operations.

### **3.2.8 Phase 3 (Recovery)**

#### **Primary Actions**

- Transition to island power restoration efforts coordinated by the PRTF.
- PRTF supports GPA coordination of the demobilization and transport of any FEMA-owned or FEMA-leased generators utilized by GPA back to their points of origin.
- PRTF supports GPA coordination of the demobilization and transport of any off-island power restoration personnel and equipment back to their points of origin.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- ESF #12 (deploys as members of the IMAT and/or Rapid Needs Assessment Team and integrates into the UCG/Joint Field Office (JFO) Operations Section)
- FEMA
- General Services Administration (GSA)
- U.S. Department of Energy (DOE)
- USACE

### **5.1.2 Territory**

- GHS/OCD
- Guam GSA
- GPA
- GWA
- Guam DPW

## **5.2 Support Agencies**

### **5.2.1 Federal**

- DOD

### **5.2.2 Territory**

- Guam Department of Education (GDOE)
- Guam Memorial Hospital (GMH)
- Guam Police Department (GPD)
- GUNG

## Appendix C-2: Restore the Power Infrastructure

### 1 *Situation*

After a Category 5 typhoon strike, Guam will sustain a significant loss of the power grid resulting from damage to the transmission and distribution systems. After a catastrophic typhoon in Guam, island power infrastructure will be severely damaged. The system will have a 100-percent loss, and it will take up to 90 days to restore 90 percent of island power to Guam residents.

Developing, receiving approval for, and executing a recovery strategy for restoring island power is necessary during the early phases of the response to ensure actions taken in support of Guam are also supporting long-term recovery goals.

#### 1.1 **Background**

The Cabras Island Power Plant (“Cabras”) is Guam Power Authority’s (GPA’s) main power plant in Piti and is located just feet from the ocean. It is particularly susceptible to inundation and storm surge damage because of its proximity to the ocean. Also found at this location is the Power System Control Center (PSCC). Power generation is supplemented by independent power producers (IPPs), who sell their power to GPA. Load sharing is regularly accomplished between GPA and its largest customers to support their production needs, at GPA’s request.

### 2 *Purpose*

This Appendix presents a strategy to support the island’s power infrastructure’s long-term restoration efforts by coordinating response efforts early with key industry stakeholders. Restoration of the power infrastructure benefits from coordinating response actions focusing on supporting GPA efforts as they work with their suppliers, contractors, and Pacific Power Association (PPA) members in power missions.

### 3 *Execution*

#### 3.1 **Concept of Operations**

The joint response organization will, through a task force co-led by GPA and the U.S. Army Corps of Engineers (USACE) (ESF #3), protect and maximize on-island power restoration capabilities (GPA) and facilitate GPA’s rapid assessment and restoration of the power system, in coordination with ESF #3’s emergency power generation and supply.

USACE/ESF #3, along with GPA, co-lead the Power Restoration Task Force (PRTF) and are activated in Phase 1b. Deployed with the Incident Management Assistance Team (IMAT), ESF #3 resources include select Prime Power capabilities, which are further augmented in Phase 1c. By deploying these resources early, critical planning and assessments, with a possibility of limited installs, may occur prior to storm impact for emergency power operations.

ESF #12 will be activated and deployed in Phase 1c and integrated into the PRTF to provide technical assistance to the GPA on infrastructure systems recovery.

**3.1.1 Critical Considerations**

- 190 miles of transmission (“backbone”) power lines; 22 percent of those are buried, primarily servicing the Tumon area.
- 1,638 miles of distribution lines, with 19 percent buried.
- GPA restoration priorities incorporate Guam Homeland Security Office of Civil Defense (GHS/OCD) priorities.
- Guam is a member of the Emergency Management Assistance Compact (EMAC) and the Pacific Power Partnership for mutual aid assistance.
- GPA has approximately 60 days of fuel storage for power plant operations.

**3.1.2 Assumptions**

- 90-percent restoration of the power system will require 60 days.
- 90 percent of wooden and 15 percent of hollow concrete poles are destroyed.
  - Within the transmission/distribution system, there are approximately 4,400 wooden poles still being used and it is anticipated there will be a 95-percent loss of these poles. The majority of poles installed in Guam are hollow concrete, hardening the system against storm damage.
- GPA’s fuel stored for power plants cannot be utilized in fueling emergency generators.
- Critical damage assessments post-storm assume road clearance occurs concurrently or has already been completed.

**3.1.3 Requirements**

**Table C-2-1: Resource Requirements**

Resource (Type)	Amount Available	Resource Owner	Amount Required	Difference
Personnel – field	12-hour operations	Utility company	24-hour operations	12 hours
Vehicles – field	12-hour operations	Utility company	24-hour operations	12 hours
Repair parts	Maintenance level	Utility company	Overhaul/restart	Significant
Fuel	15 days	Utility company	60 days	45 days

**3.1.4 Applicable Core Capabilities**

- Infrastructure Systems
- Planning
- Operational Communications
- Situational Assessment
- Operational Coordination

- Critical Transportation
- Environmental Response/Health and Safety

### 3.2 Tasks by Phase

Each phase of operations has an end state as shown in Table C-2-2.

**Table C-2-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Planning has begun by the activated Power Restoration Task Force (PRTF) co- led by Guam Power Authority (GPA) and USACE/ESF #3.
Phase 1c	Critical operational resources have been protected.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the PRTF actively executes priority actions set by the Unified Coordination Group (UCG).
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	PRTF operations transition to GPA/ESF #12 co-leads; maintenance plan in place with less than 10 percent “new” installs.
Phase 3	PRTF operations transition to GPA and ESF #12 recovery activities.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- Identify, collect, analyze, and maintain data supporting decision making responding to the impacts of a Category 5 typhoon impacting Guam.
- Establish awareness of, operational coordination, and communications with critical response partners in preparedness activities.

#### Critical Considerations

- Restoration of transmission is dependent on generation availability.
- Critical loads with priority: hospitals, water wells, Civil Defense, Port of Guam, shelters and health clinics.
- GPA restoration priorities are based on established criteria. Additional priorities must be submitted through GHS/OCD to GPA for consideration and programming into their execution list.
- GPA Standards of Procedure (SOPs) in place are regularly executed. Response priorities may be incorporated through GPA.
- Generating units are placed offline with no load. The Assistant General Manager declares “blackout.” Assessment priorities are previously established by GPA and are include the following:
  - Power Plants
  - Substations

- Transmission
- Distribution (transformers, lines, poles)

### **Primary Actions**

- GPA participates regularly in preparedness activities for operational coordination.
- GPA identifies task force leads to staff the PRTF at the Guam Emergency Operations Center (EOC).
- Validate critical information elements required by leadership for decision making following a Category 5 storm impacting Guam.
- GPA and GHS/OCD develop, maintain, and exercise MOUs/MOAs, which include power restoration coordination and inventory/supply management.
- GPA scopes and issues emergency services contract and identifies vendors for procurement of poles and transformers and shares that information with GHS/OCD.
- GPA conducts tree trimming around power lines to mitigate against damage during high winds.
- GPA will assess power infrastructure requirements and capabilities and report the status and any shortfalls to GHS/OCD monthly.
- GPA will assess and monitor GPA typhoon stock levels to ensure the required asset inventory is maintained as necessary for the timely restoration of the electrical power infrastructure. GPA will coordinate shortfalls with GHS/OCD.
- ESF #3 maintains data from previous emergency power missions executed on Guam in the Emergency Power Facility Assessment Tool (EPFAT).
- FEMA headquarters (HQ) Logistics Management Directorate (LMD) will develop concept of support, including vendors available in the western Pacific.

### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** ESF #3 and ESF #12 deploy with the IMAT and initiate joint planning activities.

### **Critical Considerations**

- High-voltage transmission and distribution electrical equipment often requires custom builds and substantial lead times for the manufacture and transport of equipment to the island. Once on-island, specialized installation equipment and labor will be required to restore the power grid.
- Federal resources and capabilities deployed to CNMI prior to the storm require hardened support facilities prior to storm impact.
- Limited rolling stock on the island used for infrastructure repair need to be safely secured to minimize damage.

- Initial staff deployed in support of PRTF planning efforts require logistics support on-island.

### **Primary Actions**

- GPA will execute its typhoon SOPs and preparedness checklist.
- GPA will activate and recall essential personnel (by position) in order to perform preparedness activities.
- GPA will increase the number of crews performing tree-trimming operations around power lines.
- GPA management will stand up the GPA Incident Command Post (ICP).
- GPA will validate staffing plan and resources on-island.
- GHS/OCD, GPA, Guam Energy Office (GEO), Guam Memorial Hospital (GMH), and FEMA will coordinate with non-GHS/OCD agencies whose facilities are listed as critical infrastructure to ascertain the operability of emergency power generation.

### **3.2.3 Phase 1c (Near Certainty)**

**Operational Focus:** Safely shelter critical equipment and stage personnel for immediate response activities.

### **Critical Consideration**

- Consistent messaging to the public is critical.

### **Primary Actions**

- GHS/OCD will coordinate to stand up the PRTF.
- GPA will coordinate with off-island MOU signatories to establish resource availability/capability and to alert those resource agencies of the possible need for support.
- The PRTF, in coordination with ESF #7 and FEMA Logistics, begin sourcing transportation resources for the movement of power restoration assets from off-island to Guam, as needed.
- The PRTF coordinates with ESF #15 and the Joint Information Center (JIC) to create and issue public service announcements (PSAs) concerning the dangers associated with downed power lines and the procedures for reporting them.
- GPA conducts inventory and equipment assessments.
- PRTF coordinates on the execution of a Mission Assignment (MA) to provide ESF #3 and ESF #12 liaisons to the PRTF and to pre-position assets to facilitate power restoration efforts post impact.

### **3.2.4 Phase 2 (Incident and Incident Response)**

#### **Operational Focus**

- PRTF assess system restoration requirements, prepare restoration plan that includes public messaging output for UCG approval, and execute restoration plan.
- Actions taken during Phase 2 must align with a long-term recovery plan led by GPA and ESF 12.

### ***3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)***

#### **Critical Consideration**

- GPA staff will be prepositioned around the island for quick action in the immediate response.

#### **Primary Actions**

- PRTF supports island power restoration by gaining power grid situational awareness, conducts operability assessments, and prioritizes power restoration based on the critical infrastructure priority list.
- PRTF supports GPA transportation requirements to move all power-related debris to a designated GPA site in order to facilitate reuse of salvageable parts and materials.
- PRTF supports GPA, ESF #3, and ESF #10 on the development of hazardous material (HAZMAT) staging sites and the disposal of HAZMAT debris resulting from storm damage.
- PRTF coordinates the augmentation of GPA resources by mobilizing any available Guam National Guard (GUNG) assets, mission assigning the Department of Defense (DOD) for any available assets and/or executing MOUs with off-island power agencies, as needed.
- ESF #7 coordinates with the PRTF to source transportation resources and provide the logistical support necessary to move off-island assets to Guam.
- PRTF, ESF #15, and the JIC will continue issuing PSAs outlining the dangers of downed power lines and the procedures for reporting them.

### ***3.2.6 Phase 2b (Employment of Resources and Stabilization)***

#### **Primary Actions**

- GPA executes existing MOUs with PPA to gain additional restoration capabilities on Guam. MOU execution is based on assessments from both GPA and the PRTF.
- PRTF coordinates and resources augmentation to GPA's six overhead and three underground line crews, as required.
- ESF #7 coordinates with the PRTF for movement of power restoration resources from the continental United States (CONUS) to Guam in support of the GPA.
- GPA conducts 24-hour operations. Line crews are limited to 16-hour shifts for emergency restoration.



- GPA and the PRTF coordinate for the shutdown of temporary power generation of critical infrastructure as island power is restored. GPA will provide updates on power restoration through the PRTF.

### **3.2.7 Phase 2c (Intermediate Operations)**

#### **Primary Actions**

- PRTF continues to monitor and report island power restoration and prioritize connection projects requiring off-island resources. As power is restored to critical facilities and existing customers are reconnected, the PRTF begins the re-deployment of off-island resources and coordinates their movement back to their points of origin.
- ESF #7 coordinates with the PRTF for the return of power restoration resources from Guam to CONUS in support of GPA.
- GPA remains resourced with sufficient crews to conduct 24-hour operations and restore island power to existing customers.

### **3.2.8 Phase 3 (Recovery)**

#### **Critical Considerations**

- The management of recovery operations will occur under a management plan developed and approved by the UCG, including the Federal Disaster Recovery Coordinator (FDRC).
- PRTF structure may be retained but will be led by an FDRC and that management structure.

#### **Primary Actions**

- PRTF will execute its transition plan to program-led recovery operations.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- General Services Administration (GSA)
- DOE
- USACE
- U.S. Department of Justice (DOJ)

### **5.1.2 Territory**

- GHS/OCD
- Guam GSA
- GPA
- GWA
- Guam DPW

## **5.2 Support Agencies**

### **5.2.1 Federal**

- DOD

### **5.2.2 Territory**

- GDOE
- GMH
- Guam Police Department (GPD)
- GUNG

## Appendix C-3: Stabilize the Water Distribution and Wastewater Systems

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### 1 *Situation*

Guam Waterworks Authority (GWA) is the municipal water production, distribution, and wastewater responsible agency. Potable water comes from springs and deep wells, and some surface water is processed. The U.S. Department of Defense (DOD) maintains its own water production, storage, and distribution networks on Guam for its federal facilities. Under the “One Guam” concept, the DOD sells water it produce at DOD wells to GWA for distribution in the north part of the island.

GWA has equipped each of its operational water wells, water treatment plants, and lift stations with emergency backup power generators to ensure systems remain operational in the event of a massive island-wide power loss. Most systems powered by emergency generators are designed to turn on automatically when power is lost; however, there are locations that require a manual start. Depending on the severity of the storm, the GWA will make a determination as to whether emergency generators are put into operation pre-or post-impact.

DOD sources and distributes water, coordinates water production support, coordinates identification of isolated areas, provides resource support to GWA water operations

The GWA and Guam Power Authority (GPA) are responsible for all emergency power generator operation and maintenance under a memorandum of agreement (MOA) and will minimize the disruption to and contamination of the water supply and distribution system through a coordinated response that focuses on infrastructure repair and the utilization of emergency generators to power water wells and booster pumps until the normal island power system is restored. As needed, bottled water will be distributed to augment water supply shortfalls.

#### 1.1 **Background**

The primary deep well field, Barrigada, is located in the north within the population center. Water developed in the north deep-well fields is supplemented by GWA through a purchase agreement with DOD, who develops that water in the central area of the island. In the south, the Ugum water plant and reservoir processes and stores surface waters developed in the south. Waters developed in the south regularly are transported north through the North/South (N/S) Bypass to supplement demand in the north. The bypass is suspended under a bridge that crosses a river, expected to be impacted by storm flooding/inundation/debris.

Three separate water systems (North, Central, South) are included as part of the island-wide water development and distribution system. All systems are interconnected, and GWA may manually shut down a water line and redirect water to any area of the island to either redirect water from the area of a spill or increase water or pressure within the system, as required, for adequate water delivery.

### 2 *Mission*

The mission for water distribution and waste water stabilization is to support GWA and DOD in producing/storing/distributing water post-storm by maximizing existing organic water

production/storage/distribution capabilities pre-landfall, including those of DOD. If necessary, provide bottled water to the southern end of the island as an interim measure.

## **3 Execution**

### **3.1 Concept of Operations**

The goal of the Concept of Operations is to collaborate with the Power Restoration Task Force (PRTF) to develop and execute a pre-storm assessment needs plan and a post-storm assessment/repair/install plan to ensure emergency power is provided to critical wells, pumps, and lift stations for essential services.

The Water and Wastewater Task Force (WWTF) consists of core representation from Guam Homeland Security Office of Civil Defense (GHS/OCD), FEMA, GWA, GPA, and Naval Facilities Engineering Command (NAVFAC), with supporting federal representation from ESF #3, ESF #7, ESF #8, ESF #10, and ESF #13. The WWTF leads a coordinated effort to maintain the functionality of the water distribution and wastewater systems following a catastrophic typhoon.

Post-storm, the WWTF will provide teams to assess damage to the water and wastewater systems, to include water wells, booster pump sites, water distribution lines, and reservoirs and will assess overall system capability and water quality. GPA will maintain the functionality of its designated and installed generators. ESF #3 will support GWA and GPA operations by providing any requested technical assistance. As needed, the Guam National Guard (GUNG), FEMA, and the DOD will deploy and/or augment installed generators at water wells and booster pump sites. For wastewater services, it is anticipated that waivers will be required for unpermitted discharges resulting from inundation of the system.

In Phase 1b, all emergency power generators are maintained and topped off by GPA under an MOA. Equipment that is not functioning and cannot be repaired immediately will be noted. Production and storage will also be increased across the system (reservoirs are filled).

In Phase 1c, all GWA facilities will be taken off-line and will run on emergency power generators.

#### **3.1.1 Critical Considerations**

- There are no established desalination plants in Guam to provide significant amounts of potable water in the event of a disaster.
- For the North/Central—
  - 120 GWA wells produce 35.3 million gallons per day.
  - Approximately 90 percent of all wells would be able to be switched to emergency power. While all wells have emergency power generators in place, they are in various states of maintenance and repair; 10 percent overall will be out of service at any given time.
- For the South—

- Ugum River Water Treatment Plant at Talofof produces 2.1 million gallons per day and services approximately 5,000 persons (less than 1 percent of the population).
- During regular operation, the water produced in the south provides 25 percent of total population requirements. The excess is transported through the N/S Bypass to the north to augment their production stores.
- The southern water system services most of the south with booster stations.
- The southern water system is reliably powered by an emergency generator.
- Post-storm turbidity requires the plant to be taken off line, and no production will occur for approximately 7 days.

### 3.1.2 Assumptions

- Damage assessments post-storm assume road clearance will occur either concurrently or will already have been completed. Utility and public service organizations will require at least 1-3 days for a complete assessment of damage to their systems.
- The potable water distribution system should not suffer significant damage but will require power or fuel for backup generators to ensure continued delivery.
- Loss of power to wastewater facilities results in a significant amount of “bypass” or “spillage” of raw sewage even though it is anticipated that usage will not be at normal levels during and immediately following the event.

### 3.1.3 Requirements

**Table C-3-1: Resource Requirements and Shortfalls**

Resource (Type)	Amount Available	Resource Owner	Amount Required	Difference
Personnel – field	8-hour operations	Guam Waterworks Authority (GWA)	24-hour operations	16 hours
Personnel – access		Main roadways – Guam Department of Public Works (Guam DPW) Facility access – GWA		
Vehicles – field	12-hour operations	GWA	24-hour operations	12 hours
Vehicles – access		Main roadways – Guam DPW Facility access – GWA		

Resource (Type)	Amount Available	Resource Owner	Amount Required	Difference
<b>Generators</b>	Majority of facilities and pumps have backup generators	Guam Power Authority (GPA)	Additional mobile generators and repair parts	Major end items not on-hand; parts and supplies not sufficient for multiple repairs or replacement
<b>Fuel</b>	None (0 days)	GPA	30-90 days	Primary limiting factor – Dependent on GPA's fuel storage, if available
<b>Mobile water tanks with delivery vehicle</b>	Water tankers – 4  Water buffaloes – 2	GWA		Dependent upon extent of damage; not sufficient for island-wide water system outage

### 3.1.4 *Applicable Core Capabilities*

- Infrastructure Systems
  - Integration of DOD systems
- Planning
  - Permit waiver for wastewater treatment plant discharge
- Operational Communications
- Situational Assessment
  - Critical bridge and N/S Bypass
- Operational Coordination
- Critical Transportation
  - Access to the south
- Environmental Response/Health and Safety
  - Boil water notice and communication
  - Sampling and water quality coordination
  - HAZMAT storage

### 3.2 **Tasks by Phase**

Each operational phase has an end state, as shown in Table C-3-2.

**Table C-3-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Joint planning and coordinated messaging have begun.
Phase 1c	All wells have switched to 100% generator power, all reservoirs are filled, and ESF#10 is coordinating wastewater waiver.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the WWTF actively executes priority actions set by the UCG.
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	Demobilization begins.
Phase 3	WWTF operations transition to the Guam DPW and recovery co-leads.

### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- Identify, collect, analyze, and maintain data that supports decision making in the response to a Category 5 typhoon impacting Guam.
- Establish awareness, operational coordination, and communications among critical response partners in preparedness activities.

#### Critical Considerations

- Primary interdependencies are power, fuel for generators, and access to facilities and pumps for operation/assessment/repair.
- The Fena Reservoir and its plant are owned and operated by the U.S. Navy (USN) and they have additional processing capacity.
- The water distribution system is a single network, with no electronic control center.

#### Primary Actions

- GHS/OCD identifies, assesses, and coordinates with partner agencies on any on-island commercial water distribution and transportation assets capable of providing potable water to designated locations pre- and post-impact.
- GWA monitors its overall inventory of needed water supply and distribution materials maintained in the GWA warehouse.

### 3.2.2 Phase 1b (Increased Likelihood)

#### Operational Focus

- Deploy select resources to the Regional Response Coordination Center (RRCC), National Response Coordination Center (NRCC), and Emergency Operations Center (EOC) for situational awareness and planning purposes.
- Deploy water and wastewater experts (ESF# 10) and support development of the Regional Support Plan (RSP).

### **Critical Considerations**

- Planning by the WWTF must be coordinated with the PRTF and must consider logistics support.

### **Primary Actions**

- GWA surveys existing generators and develops resource requirements for fuel.
- GHS/OCD and FEMA form the WWTF consisting of core representation from GHS/OCD, FEMA, GWA, GPA, Naval Facilities Engineering Command (NAVFAC), ESF #3, ESF #7, ESF #8, ESF #10, and ESF #13.
- GWA and NAVFAC increase water production to fill reservoirs and water towers.
- Incident Management Assistance Team (IMAT) conducts initial planning with GHS/OCD.
- RRCC alerts ESF #10 for possible deployment and activates ESF #10 position within the RRCC.
- GWA and GPA coordinate on the fueling and testing of all designated emergency generators. Nonoperational generators will be repaired/replaced pre-storm, if possible.
- All generators that are nonoperational at the end of Phase 1b will be reported to the PRTF at the EOC.
- GWA validates chlorine availability for disinfection of water wells and booster pump sites.
- GWA coordinates with GHS/OCD and ESF #15 for the issuance of public service announcements (PSAs) that encourage pre-storm water storage and provide advice on in-home water storage requirements, capabilities, techniques, and usage.

#### **3.2.3 Phase 1c (Near Certainty)**

### **Operational Focus**

- Implement protective measures and increase public messaging.

### **Critical Considerations**

- Primary generator list developed by GWA for wells in Barrigada field. Field team survey of those wells related to generator status is critical.
- Messaging for household water storage pre-storm is needed.

### **Primary Actions**

- GWA and GPA report and coordinate generator status with PRTF for immediate assessment.
- ESF #15 issues public messaging encouraging the public to store and conserve water.
- ESF #10 initiates waiver for emergency discharge for wastewater treatment plants impacted by the storm



- GHS/OCD activate and staff WWTF.
- WWTF communicates fuel priorities with the Fuel Task Force (FTF).
- GWA conducts protective measures to mitigate damage to the N/S Bypass and Barrigada Reservoir.
- WWTF provides situational awareness of the status of increased water production and storage to the Guam EOC and RRCC.
- RRCC coordinates an emergency discharge waiver through ESF #10 to relieve pressure on the wastewater system.
- GWA inventories and safeguards stockpiles of chlorine for the disinfection of water wells and booster pump sites pre-impact.
- GWA and WWTF coordinate with GPA to start all designated emergency generators at water wells, booster pump sites, and wastewater facilities and disconnect those locations from the main power grid. GPA reports all nonoperational generators to the WWTF.
- GWA and WWTF ensure equipment and trucks required for post-impact assessments are refueled and positioned for post-storm response.
- GWA coordinates debris clearance routes and priorities with the Debris Task Force (Debris TF) to ensure water system assessment and restoration activities can be prioritized post-storm.

### ***3.2.4 Phase 2 (Incident and Incident Response)***

#### **Operational Focus**

- Assess water system and re-establish communication and situational awareness with commercial water production companies.

#### **Primary Actions**

- WWTF assesses whether any customers are/will be isolated from water supplies for more than 3 days.
- GWA extends GWA personnel labor shifts to ensure personnel can conduct time-critical emergency repairs.
- GWA inventories the availability of chlorine for disinfection of water wells and booster pump sites post-impact.
- GWA and WWTF monitor disinfection of water wells and booster pump sites.
- GWA and WWTF deploy damage assessment teams made up of GWA rovers and engineers. GWA ensures damage assessment findings are coordinated with the Unified Command Group (UCG) through GHS/OCD and FEMA.
- GWA and WWTF continue to monitor the overall inventory of needed water supply and distribution materials maintained in the GWA warehouse and coordinate with GHS/OCD, ESF #3, and ESF #7 to source, acquire, and transport the supplies and capabilities needed to restore the water supply and distribution system.

- WWTF coordinates with GHS/OCD, FEMA, ESF #3, and ESF #7 to source, acquire, and transport generators to augment any inoperative generators at critical water wells or booster pump sites.
- GWA and WWTF coordinate with GHS/OCD, FEMA, and ESF #7 to provide additional security for GWA assets deployed around Guam, as needed. (Additional security may come from GUNG, GPD, and/or contracted private security, as available and needed.)
- GWA and WWTF coordinate with ESF #6 and ESF #8 to prioritize water supplies for the hospital and for designated emergency shelters, which are pre-established priority locations.
- GWA and WWTF coordinate with GHS/OCD, ESF #3, and ESF #7 to provide qualified personnel and repair assets to augment GWA capabilities.
- GWA and WWTF coordinate with GHS/OCD, FEMA, the Joint Information Center (JIC), and ESF #15 to issue a “boil water” order if water contamination dictates.
- WWTF and GHS/OCD coordinate with ESF #3 and ESF #7 to execute established contracts with commercial potable water transportation vendors.
- WWTF and GHS/OCD coordinate with ESF #1, ESF #3, and ESF #7 to contract with on-island commercial water vendors to provide bottled water.
- GHS/OCD, ESF #1, ESF #3, and ESF #7 contract for the transportation of bottled water to designated areas.
- GHS/OCD, ESF #3, and ESF #7 coordinate on the activation and mobilization of GUNG water transportation and storage assets.
- GHS/OCD, ESF #3, ESF #7, and FEMA coordinate with the Defense Coordinating Officer (DCO) to mission assign the DOD to provide desalinization units, reverse osmosis water purification units (ROWPUs), and water transportation and storage units, as needed.
- GHS/OCD coordinates with GWA, ESF #3, and FEMA on prioritizing the re-establishment of the water supply and distribution system based on damage assessment results.

### ***3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)***

**Operational Focus:** Assess N/S Bypass and anticipated south water production schedule. WWTF determines whether south water customers are/will be isolated from water supplies for more than 3 days and prepare a plan for community water delivery.

#### **Critical Considerations**

- The GWA water system is manually valved and can be isolated at any point but must be physically executed.
- The GWA water system is interconnected to the DOD system; however, each system is separate.

- The southern area of the island is likely to experience greater debris due to green waste, and debris clearance operations should be coordinated and informed by WWTF for their visibility.
- The development of water (quantity) is prioritized over testing (quality) due to resource constraints. Informing the public to boil water will assure water quality as maximum contaminant levels are not anticipated to be suspended.

### **Primary Actions**

- Assess the Fena Reservoir and plant owned by the USN because it has capacity to increase production or treatment.
- JIC communicate “boil water” notices in a timely manner.
- WWTF coordinates directly with the FTF for generator fuel delivery priority.
- GWA assess and report status of the N/S Bypass and Barrigada Reservoir.
- WWTF requests an increase to water production by NAVFAC in response to the Fena Reservoir being taken off line.
- IMAT and ESF #10 assist with the assessment and emergency repair of the N/S Bypass and other critical points in the water and wastewater distribution system.
- GWA deploys damage assessment teams made up of GWA rovers and engineers. The GWA ensures damage assessment findings are coordinated with the UCG through the WWTF.
- GWA continues to monitor its overall inventory of needed water supply and distribution materials maintained in the GWA warehouse and coordinates with WWTF to request, source, acquire, and transport the supplies and capabilities needed to restore the water supply and distribution system.
- WWTF coordinates with ESF #6 and ESF #8 to prioritize water supplies for the hospital and designated emergency shelters, which are pre-established priority locations.
- WWTF coordinates with GHS/OCD, ESF #3, and ESF #7 to provide qualified personnel and repair assets to augment GWA capabilities.
- WWTF and GHS/OCD coordinate with ESF #3 and ESF #7 to execute established contracts with commercial potable water transportation vendors, as needed.
- The WWTF prioritizes the re-establishment of the water supply and distribution system based on damage assessment results.

### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

**Operational Focus:** Maintain delivery of water to customers in the short term, while defining long-term requirements.

### **Critical Considerations**

- There is sufficient laboratory capacity on Guam to do water quality testing.

- Skilled personnel may be disaster survivors and unavailable.

### **Primary Actions**

- WWTF develop a plan to address any requirements for supplemental water resources:
  - Water buffaloes
  - Bottled water
  - Water tenders
- WWTF continues to coordinate directly with the FTF to ensure that generator fuel delivery priorities are communicated and accomplished.
- GHS/OCD and the WWTF continue to communicate the “boil water” order through public messaging if water contamination dictates.
- IMAT coordinates additional water production by DOD.
- GWA coordinates with ESF #6 and ESF #8 to prioritize water supplies for the hospital and designated emergency shelters, which are pre-established priority locations.

#### **3.2.7 Phase 2c (Intermediate Operations)**

**Operational Focus:** Transition to program-led recovery efforts.

### **Critical Consideration**

- If additional water purchases were made from DOD, plan a reduction and/or suspension of that assistance and communicate it accordingly.

### **Primary Actions**

- JIC coordinates effective messaging to inform the public when the “boil water” notice is lifted.
- WWTF assess whether additional water resources are required and develop request.

#### **3.2.8 WWTF and JIC coordinate to appropriately release data related to water quality. Phase 3 (Recover)**

**Operational Focus:** Through mitigation efforts, define and scope a project that will install a raw water tank in the south at Ugum.

### **Critical Considerations**

- Raw water storage (5 million gallons) in Ugum would be capable of servicing the entire south population post-storm impact without having to wait for turbidity or solids to process out of the surface water sources and allow processing.

### **Primary Actions**

- Demobilize remaining assets.
- GWA and GHS/OCD support mitigation efforts.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- ESF #10
- WWTF participants
- FEMA
- U.S. Army Corps of Engineers (USACE)
- General Services Administration (GSA)

#### **5.1.2 Territory**

- GHS/OCD
- WWTF participants
- GWA
- GPA
- Guam GSA

### **5.2 Support Agencies**

#### **5.2.1 Federal**

- DOD

#### **5.2.2 Territory**

- GUNG

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## Appendix C-4: Deliver Fuel to Maintain Continuity of Essential Operations and Services

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### 1 *Situation*

Island power will be out as the storm passes through Guam, leaving critical infrastructure reliant on emergency generator power throughout the island. These generators all require continuous fuel feed.

After a catastrophic typhoon, the ability to distribute fuel to hundreds of emergency power generator locations will be critical for maintaining essential services and supporting critical facilities. Guam has significant fuel stores; however, Guam may require assistance in transportation and end-point distribution.

#### 1.1 **Background**

Guam has no conventional energy resources of its own and meets nearly all of its energy needs, including electricity generation, with petroleum products shipped in by tanker to the island's only deep-water port, located at Apra Harbor on the central western side of the island. In 2012—the last year for which there is complete data—Guam consumed approximately 15,600 barrels per day (b/d) of petroleum products. Approximately 43 percent of petroleum consumed is residual fuel oil used to generate electricity.

### 2 *Purpose*

The purpose of this Appendix is to provide a strategy to deliver fuel to continue essential services. Fuel requirements during response activities are different than those during non-emergency conditions. The sourcing, deploying and employing of supplemental capabilities prior to and during active response continues essential services delivery to the public. . The decentralization of fuel delivery should result in each agency/department maintaining responsibility for its own refueling schedule.

### 3 *Execution*

#### 3.1 **Concept of Operations**

This concept of operations focuses on the Fuel Task Force (FTF) developing and executing a fueling strategy that considers requirements for first responders, other critical response and recovery activities, and critical facilities and essential services and also provides fuel for commercial consumption that is sustainable and executable, given the scarcity of fueling resources on the island.

Fueling hundreds of generators in use at various essential services or critical facility locations operating at different burn rates across all areas of the island increases operational risk. Decentralization of this task through a process where generator owners/operators become responsible for their own fuel operations pushes the responsibility of the task to the tactical, operational end-user level instead of being managed at the higher coordination, strategic territorial/federal level. The criticality of this task, however, and the limited availability of any organic fuel distribution resources requires federal support for success.



After Typhoon Pongsona, many retail gas stations were operational, but fuel rationing was instituted in response to a fuel storage tank fire. Fuel rationing heightened community concerns and required increased law enforcement presence to ensure public safety. The joint organization outlined in this plan can assist retail industry recovery by using one location for response vehicles. By fueling at a dedicated retail station, response personnel will not be competing for fuel services with the community. The Fuel Task Force (FTF) must assess whether this centralized fueling needs to occur in a temporary, secure location immediately post-storm or whether retail stations may be used.

In Phase 1b, Guam's Department of Public Works (Guam DPW) is task organized to deliver fuel to Guam-owned generators, supplementing the efforts of the Guam Power Authority (GPA), which will also be fueling their critical services and facility generators. Support from the FEMA Logistics Management Directorate (LMD) and others will, in Phase 1b, focus on the sourcing, purchasing, and transporting of supplemental fuel storage/delivery capability, which can be truck-mounted into regular passenger/cargo vehicles owned by Guam agencies and used without any special licensing. This places the responsibility into the hands of generator operators and relieves the small DPW staff to focus on debris clearance post-storm with their limited capabilities.

### ***3.1.1 Critical Considerations***

- Guam's substantial on-island fuel reserves are of finished product. There are no refineries on Guam.
- Guam fuel stocks are substantial, but specific fuel types may require modifications to ordering to meet disaster demands.
- Guam DPW is responsible for fuel operations for Guam generators.
- Guam's fuel storage infrastructure is adequate but may be impacted by surge and inundation. Fuel storage facilities are located at the Port of Guam (see Figure C-4-1: Fuel Storage Infrastructure).
- The Government of Guam (GovGuam) does not have a central fuel location/depot for official vehicles.



**Figure C-4-1: Fuel Storage Infrastructure at the Port of Guam**

### 3.1.2 Assumptions

- Industry has emergency power at all commercial fuel stations and will reopen as soon as commercially feasible.
- Critical transportation routes will be disrupted.
- Commercial fuel distributors with limited equipment have priority contracts with large commercial clients and will be unable to meet the surge requirements associated with hundreds of emergency generators operating at different burn rates throughout the life of the response.
- Retail fuel stations will be closed to the public.

### 3.1.3 Requirements

- Temporary fuel storage capability

### 3.1.4 Applicable Core Capabilities

- Infrastructure Systems
- Planning
- Public Information and Warning
- Fire Management and Suppression
- Logistics and Supply Chain Management

- On-scene Security, Protection, and Law Enforcement
- Operational Communications
- Situational Assessment
- Operational Coordination
- Critical Transportation
- Environmental Response/Health and Safety

### 3.2 Tasks by Phase

Each operational phase has an end state, as shown in Table C-4-.

**Table C-4-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Guam DPW executes checklist of pre-storm actions to fuel and test critical emergency generators
Phase 1c	Priorities for emergency fuel have been identified and validated by Guam Homeland Security Office of Civil Defense (GHS/OCD) and requests for Emergency Management Assistance Compact (EMAC) mutual aid have been made.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the PRTF actively executes priority actions set by the Unified Coordination Group (UCG).
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	Power Restoration Task Force (PRTF) transitions to Guam Power Authority (GPA)/ESF #12 co-leads and maintenance plan is in place with less than 10% “new” installs.
Phase 3	FTF transitions to Guam DPW and responsible agencies and department and ESF #12 for recovery activities.

In Phase 1c, with the arrival of the Incident Management Assistance Team (IMAT), the FTF will be activated at the Guam Emergency Operations Center (EOC) and will identify all fueling requirements. FEMA LMD will forward deploy purchased portable fuel tanks with fueling capability to mount on Guam agency and department vehicles.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- Develop and share with response stakeholders an inventory of generators and their fuel requirements.
- Establish a standard of procedure (SOP) for receiving, mounting, using, and returning portable fuel capability to departments and agencies.

### **Critical Considerations**

- Coordination with industry partners to ensure their representation on the FTF.

### **Primary Actions**

- Develop a fuel plan that complements the essential services and critical facility listing developed by Guam.
- Explore/source commercial portable fuel resources.
- GHS/OCD assesses the operational readiness of critical fuel and distribution assets.
- GHS/OCD coordinates with the Guam General Services Agency (Guam GSA) to source and establish contracts for available on-island commercial fuel distribution assets.
- GHS/OCD, in coordination with neighboring islands, establishes EMAC agreements to augment current Territory of Guam fuel distribution capabilities through mutual aid.

#### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** Guam DPW and GPA validate operational status and fuel emergency generators for essential services and critical facilities.

### **Critical Considerations**

- GovGuam does not have a fuel depot.
- GovGuam does not have emergency fuel contracts in place.
- Guam DPW has one 500-gallon fueling capability.

### **Primary Actions**

- With commercial partners, FTF identifies commercial fuel stations that may be used by responders immediately post-storm.
- FTF develops refueling plan.
- Guam DPW conducts fuel delivery to pre-identified critical infrastructure.
- Regional Response Coordination Center (RRCC) coordinates support through ESF #12.
- National Response Coordination Center (NRCC) notifies the Defense Logistics Agency (DLA) of potential fuel requirements and notifies ESF #3, ESF #10, and ESF #12.
- U.S. Coast Guard (USCG) District 14 (D14) and the Port Authority of Guam (PAG) contact bulk fuel suppliers to validate on-hand stocks and assess the number of days of supply with the FTF.
- GHS/OCD coordinates with private vendors and contracts to assess the current availability and operational readiness of fuel supply and distribution augmentation assets.
- GHS/OCD, in coordination with the Defense Coordinating Officer (DCO), establishes the availability and operational readiness of on-island Department of Defense (DOD) fuel supply and distribution assets.

- GHS/OCD alerts government agencies and private industry of approaching storm and ensures they are prepared to execute safeguarding procedures to protect on-island fuel storage supplies.

### 3.2.3 *Phase 1c (Near Certainty)*

**Operational Focus:** Purchase, transport, receive, and install portable fuel storage/delivery capability onto appropriate GovGuam vehicles.

#### **Critical Considerations**

- While Guam DPW has primary responsibility for fueling operations, it has one 500-gallon portable fuel storage/delivery resource.
- Guam DPW is the primary agency tasked with debris clearance post-storm.

#### **Primary Actions**

- FTF prioritizes agencies for fuel distribution support.
- FTF verifies that trucks are available for designated self-fueling agencies who will receive distribution support.
- GHS/OCD and ESF #3 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.
- GHS/OCD and ESF #7 establish prioritized commercial fuel stations for the refueling of emergency/disaster response vehicles.
- GHS/OCD coordinates with ESF #7 to activate contracts to provide additional commercial fuel assets.
- GHS/OCD coordinates with ESF #7 to provide additional neighbor-island commercial fuel supply and distribution assets.
- GHS/OCD coordinates with ESF #7 to activate contracts with tug/barge operators to transport fuel supply and distribution assets from neighboring islands to Guam.
- GHS/OCD coordinates with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
- IMAT conducts joint planning with GHS/OCD and FTF.
- Federal Staging Area (FSA) receives and issues Transcubes to Guam DPW pre-impact.
- FTF validates current availability and location of on-island distribution capabilities.
- ESF #15, through the Joint Information Center (JIC), creates and implements public service announcements (PSAs) to encourage the populace to fill all fuel tanks prior to impact.
- FEMA LMD procures and transports mobile refueling capability (truck-mounted with pumps) to Guam.

- FTF coordinates with local retail stations to designate single station for “responder use only.”

### **3.2.4 Phase 2 (Incident and Incident Response)**

**Operational Focus:** Immediate analysis of whether a response fuel depot must be constructed or if fueling can be accomplished through a retail station identified for responders.

#### **Critical Consideration**

- Using a retail service station for responder fueling only may cause disruption in the host community and require additional law enforcement/security personnel.

#### **Primary Actions**

- ESF #10 and ESF #12 determine additional storage and distribution capability requirements and coordinate resourcing.
- Execute additional requirements and capabilities movement coordination via Mission Assignment (MA); coordinate with the U.S. Transportation Command (USTRANSCOM).
- Execute additional fuel replenishment movement and delivery coordination via an MA with the DLA and USTRANSCOM.
- In coordination with the FTF and PRTF; ESF #12 assists with the establishment of a fuel depot at the alternate port.
- Governor of Guam mobilizes Guam National Guard (GUNG) fuel assets.
- GHS/OCD, through the FTF, maintains visibility of emergency generator fuel burn rates at critical infrastructure locations and adjusts fuel delivery schedules as necessary.
- GHS/OCD coordinates with neighbor islands to utilize EMAC to obtain additional fuel assets through mutual aid, if required.
- FTF assess whether responder fuel point requires establishing a temporary fuel depot.
- If a temporary fuel depot is required, FTF coordinates with the Port of Guam to use their already permitted site.
- FTF develops an executable plan with ESF #7, ESF #10, and ESF #12 to establish a temporary fuel depot.
- GHS/OCD and ESF #12 coordinate on the request for a waiver from the Guam Environmental Protection Agency (Guam EPA) to utilize high-sulfur fuel in GPA's baseline generator.
- FTF coordinates situational awareness with Port of Guam to determine impacts to response operations, determine any damage to fuel facilities located within Apra Harbor, and brief the UCG.
- GHS/OCD and ESF #3 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.

- GHS/OCD and ESF #7 establish prioritized commercial fuel stations for the refueling of emergency/disaster response vehicles.
- GHS/OCD coordinates with ESF #7 to activate contracts to provide additional commercial fuel assets.
- GHS/OCD coordinates with ESF #7 to provide additional neighbor-island commercial fuel supply and distribution assets.
- GHS/OCD coordinates with ESF #7 to activate contracts with tug/barge operators to transport fuel supply and distribution assets from neighboring islands to Guam.
- GHS/OCD coordinates with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
- GHS/OCD and ESF #3 identify and deliver additional fuel to emergency generator locations at water wells.
- GHS/OCD, through the FTF, maintains visibility of emergency generator fuel burn rates at critical infrastructure locations and adjusts fuel delivery schedules as necessary.
- GHS/OCD and ESF #10 and ESF #12 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.
- GHS/OCD and ESF #15, through the JIC, create and implement PSAs to outline fuel limitations, institute fuel rationing procedures, and stipulate commercial fueling stations for emergency/disaster response vehicles only.

### 3.2.5 *Phase 3 (Recovery)*

**Operational Focus:** Demobilize resources, as required.

#### **Primary Action**

- UCG conducts demobilization procedures in accordance with the demobilization plan.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- General Services Administration (GSA)



### **5.1.2 Territory**

- GHS/OCD
- Guam Waterworks Authority (GWA)
- GPA
- Guam GSA
- Guam DPW
- GDOE
- GMH
- Guam Police Department (GPD)
- Guam Fire Department (GFD)
- Guam Hotel and Restaurant Association (GHRA)

## **5.2 Support Agencies**

### **5.2.1 Federal**

- DOD

### **5.2.2 Territory**

- GUNG

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## Appendix C-5: Conduct Mass Care Services and Sheltering of Survivors

### 1 *Situation*

After a catastrophic typhoon impacts Guam, it is anticipated that up to 7,400 homes and multi-family structures could be rendered uninhabitable, resulting in a displaced population of approximately 27,000. The majority of survivors will choose to shelter on their properties or with extended family, leaving an estimated 8,400 individuals seeking shelter.

A response operation's immediate priority is to take appropriate lifesaving and life-sustaining measures, including sheltering to support the affected community.

#### 1.1 **Background**

Guam is a hardened jurisdiction with many of its residents are familiar with and prepared to care for their families in the events of a typhoon strike. Most residential structures are concrete and have outside kitchens, where cooking with propane fuel is common.

Within each village, the mayor is the primary point of contact with residents, and the mayor's office is considered the "government seat" for the village. During catastrophic events, each mayor's office will be the initial coordination point and also serve as an emergency shelter for the village. Through the mayor's office, information will be shared and requests for assistance will be elevated to the Guam Homeland Security Office of Civil Defense (GHS/OCD) through the Emergency Operations Center (EOC).

With a strong sense of community, faith, and familial bonds, the residents of Guam readily welcome extended family and friends to their homes in times of need. There is a segment of the population on Guam that is homeless, choosing to live in undeveloped areas in a subsistence lifestyle; those individuals will require emergency sheltering. Successful execution of the strategy detailed here will reduce the numbers of emergency shelterees to approximately 2,700 who will seek long-term sheltering.

### 2 *Purpose*

This Appendix presents tasks and coordination needed in the mass care and sheltering mission and strategies to provide Tier 2 sheltering and mass care services through a combination of fixed facilities and the provision of tents to survivors, giving them the option to shelter in place post-impact.

### 3 *Execution*

#### 3.1 **Concept of Operations**

Providing good situational awareness of shelter locations and staffing operations prior to storm impact will assist the transition of individuals to Tier 2 shelters.

Guam has an established Mass Care Task Force (MCTF) that will activate that in Phase 1b. The MCTF will provide Tier 2 sheltering and mass care services through a combination of fixed facilities and mayors' facilities, supplemented through the provision of tents to survivors, giving them the option to shelter in place post-impact. FEMA Individual Assistance (IA) subject matter

experts (SMEs) will travel with the Incident Management Assistance Team (IMAT) as essential personnel and will integrate into the MCTF as co-lead. In Phase 1c, GHS/OCD will open emergency shelters and the Guam Department of Public Works (Guam DPW) will assist with critical transportation requirements. ESF #6 and ESF #8 will engage in joint planning.

**3.1.1 Critical Considerations**

- There are 21 villages, with individual Mayors being represented in the EOC by the Mayor’s Council of Guam (MCOG) representative.
- The Guam Department of Education (GDOE) is lead agency for emergency shelters.
- Guam uses the cafeterias at GDOE-managed facilities as shelter space.
- The leads for Tier 2 shelters are village mayors.
- Designated shelters have a maximum capacity of 2,350 individuals.
- With a high visitor population of non-U.S. citizens, the State Department’s Office of Emergency Management and Office of Foreign Missions will integrate into the response organization.

**3.1.2 Assumptions**

- Immediate feeding needs (0-10 days) will be sufficiently met by nonprofits and other voluntary organizations.
- Water and fuel is available at all shelter locations.
- Shelterees will arrive at shelters with 7-10 days of food, as messaging from GHS/OCD has recommended.
- Hotels will continue to provide resources (shelter/feeding) to their guests.

**3.1.3 Requirements**

- Typhoon impacts to Guam will make thousands of housing units uninhabitable, requiring mass care support for sheltering, feeding, and commodities.

**Table C-5-1: Guam Mass Care Requirements**

Total Population of Guam	Displaced Population Estimate	Estimated Population Requiring Immediate Sheltering	Population Requiring Long-term Sheltering
159,358	27,343	8,000	2,734

**3.1.4 Applicable Core Capabilities**

- Planning
- Public Information and Warning
- Operational Coordination
- Critical transportation

- Environmental Response/Health and Safety
- Logistics and Supply Chain Management
- Mass Care Services
- On-scene Security, Protection and Law Enforcement
- Operational Communications
- Public Health, Healthcare, and Emergency Medical Services
- Situational Assessment

### 3.2 Tasks by Phase

Each operational phase has an end state, as shown in Table C-5-2.

**Table C-5-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	A Joint Information Center (JIC) has been established and is coordinating all messaging.
Phase 1c	Emergency shelters have been established with ground transportation provided by Guam DPW.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the Power Restoration Task Force (PRTF) actively executes priority actions set by the Unified Coordination Group (UCG).
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	PRTF transitions to Guam Power Authority (GPA)/ESF #12 co-leads and maintenance plan is in place with less than 10% "new" installs.
Phase 3	PRTF transitions to GPA and ESF #12 recovery activities.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- During this phase, GHS/OCD and FEMA should determine existing logistics and resource capabilities, develop deliberate plans and procedures, and conduct training and exercises to validate existing plans.

#### Critical Considerations

- The Guam Voluntary Agency Organizations in Disaster (VOAD), private sector, and Government of Guam (GovGuam) have the capability to conduct some feeding operations. Establishing awareness of operational coordination and communication with critical response partners in preparedness activities is critical.
- GHS/OCD does not anticipate having to provide feeding services to the population in the first 7 days of the response, allowing for deliberate planning on how best to coordinate feeding efforts.

### **Primary Actions**

- GHS/OCD and GDOE coordinate with the American Red Cross (Red Cross) for shelter management team training.
- GHS/OCD, in coordination with GDOE, develops a shelter prioritization plan.
- GHS/OCD creates a prioritized list of alternate shelter sites (hotels, field houses, etc.) for additional general population shelter capacity.
- Guam DPW is prepared to transport persons seeking shelter from village mayors' offices to designated emergency shelters.
- GDOE and Guam Department of Agriculture designate primary and alternate pet shelter sites.
- GHS/OCD identifies transitional shelter sites (hotels, vacant houses/apartments, soft-sided shelter sites, etc.) and develops memorandums of understanding (MOUs)/contracts to utilize these facilities as needed.
- GHS/OCD, in coordination with FEMA, develops a plan to receive incoming response resources, transport resources from a Federal Staging Area (FSA) (if activated) to designated points of distribution (PODs), and distribute resources to the local population.

#### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** Coordinate public messaging and establish a Joint Information Center (JIC).

### **Primary Actions**

- GHS/OCD establish information flow between Port Operations personnel and the MCTF to retain and report visibility on the flow of commodities into Guam in support of survivors.
- GDOE, with assistance from ESF #3, will install GDOE-owned generators and ensure their operational status.
- Guam DPW will top off all fuel and water at shelter locations.
- GHS/OCD and FEMA activate and co-lead the MCTF with representatives from the GDOE, Guam National Guard (GUNG), MCOG, Guam DPW, ESF #6, ESF #7, ESF #8, ESF #11, and ESF #15.
- GDOE executes their 2017 Sheltering Plan.
- ESF #15, through the JIC and in coordination with ESF #6 and ESF #11, develops and broadcasts public service announcements (PSAs) regarding shelter locations (and their status)—including those for the general population, individuals with access and functional needs or medical needs, and pets—and the resources/commodities individuals should bring with them to shelters.
- VOADs assess on-island inventories, identify potential shortfalls, submit requests to parent agencies for delivery, and alert and notify volunteer staff.

- Guam DPW ensures that a sufficient number of buses and bus drivers are rostered and available to transport persons seeking shelter from village mayors' offices to designated emergency shelter locations.

### 3.2.3 *Phase 1c (Near Certainty)*

**Operational Focus:** Activate/open emergency shelters supported by transportation, where needed.

#### **Primary Actions**

- GDOE opens emergency shelters.
- Household pets will be sheltered at Ordot-chalan Pago Elementary.
- JIC messaging is disseminated to residents seeking shelter to remind them to bring 7-10 days of supplies for each person to the shelter.
- GHS/OCD, VOADs, and the U.S. Department of State (DOS) will discuss international donation management. A donation management deliberate plan is developed by MCTF and approved by the UCG.
- VOADs will notify off-island resources and develop a staffing plan.
- MCTF establishes regular communications with the Guam Hotel and Restaurant Association (GHRA) for assistance.
- ESF #15, through the JIC and in coordination with ESF #6 and ESF #11, develops and broadcasts PSA information on shelter locations (and their status)—including those for the general population, individuals with access and functional needs or medical needs, and pets—and the resources/commodities individuals should bring with them to shelters.
- FEMA and ESF #6 coordinate with ESF #15 to establish procedures for communications with foreign consulates and the tourist population to provide information concerning tourists.
- Guam DPW begins transporting persons seeking shelter from village mayors' offices to designated emergency shelter locations using assigned buses.
- VOADs assess on-island inventories, identify potential shortfalls, submit requests to parent agencies for delivery, and alert and notify volunteer staff.
- FEMA Logistics Management Directorate (LMD) validates commodities available in the Guam Distribution Center (DC) and the Hawaii DC and develop support plan.
- GHS/OCD coordinates with the GDOE, ESF #6, and ESF #11 to activate shelters, as needed, and initiate reception procedures for the general population and household pets. Service animals will shelter with their owners.
- MCTF coordinates with mayors to ensure residents with access or functional needs in their individual villages are transported to emergency shelter locations.



- GHS/OCD coordinates with ESF #6 and ESF #7 to execute contracts for additional mass shelter locations as needed (hotel ballrooms, community centers, shopping malls, field houses, etc.).
- GHS/OCD activates and plans for staffing PODs.
- GHS/OCD coordinates with ESF #7 to alert DC Guam for possible deployment of select resources to shelter sites.
- Mayors' offices are opened and staffed as emergency shelters.
- Communications between the MCTF and the emergency shelters has been established.

### **3.2.4 Phase 2 (Incident and Incident Response)**

#### **3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)**

**Operational Focus:** MCTF participates in damage assessments and develops a distribution plan to provide tents to displaced persons, giving them the option to shelter in place on their own properties post-impact.

#### **Critical Considerations**

- The medically fragile or others with access and functional needs will likely have been transported to the mayors' offices. Once Condition of Readiness (COR) 4 has been reinstated, damage assessments must be prioritized and these individuals must be integrated into the planning for long-term sheltering. The MCTF will be critical to that task.

#### **Primary Actions**

- Gain situational awareness.
- Mayors' facilities must be assessed for Tier 2 sheltering.
- Validate that local mayors' offices are each village's POD location.
- Initial push from Guam DC to Guam POD of 200 tents, kits, and 200 tarps to mayors' offices.
- ESF #6 case management and direct assistance to survivors begins.
- MCTF coordinates with ESF #8 to provide triage/first aid at community health centers, as needed.
- Guam DPW recalls bus drivers for transport of persons seeking shelter from village Mayor's offices to shelter locations.
- The GDOE conducts closing procedures in accordance with the 2017 Sheltering Plan.
- The UCG and ESF #6 coordinate mass care and temporary housing support to an estimated population of roughly 27,000 people.
- MCTF develop a transitional sheltering strategy.
- MCTF, ESF #7, and FEMA LMD coordinate to deliver bulk commodities to shelters and staging areas.

- ESF #15, through the JIC, develops and broadcasts PSAs to manage expectations and reassure the public regarding mass care and emergency assistance operations.

### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

**Operational Focus:** Program personnel (FEMA IA staff and others involved in case management) have been integrated into operations under the MCTF and have established a Disaster Recovery Center (DRC).

#### **Critical Considerations**

- FEMA coordinates the following IA program support to survivors:
  - Financial assistance for home repairs
  - Personal property loss assistance
  - Disaster loans
  - Disaster-Supplemental Nutrition Assistance Program (D-SNAP) support when requested by the Territory of Guam and in coordination with ESF #11
  - Crisis counseling
  - Disaster unemployment assistance
  - Disaster legal services
  - Support and services to access and functional needs/medical needs populations
  - Other federal and state agency disaster benefits

#### **Primary Actions**

- MCTF, Operations, and Safety personnel identify and survey DRC locations.
- Logistics coordinates moving supplies to PODs with MCTF assistance.
- ESF #7 ensures the continued delivery of emergency relief supplies (to include fuel for generators) to Tier 2 shelters and PODs.
- MCTF assists with tent distribution.
- MCTF and VOADs coordinate tent install teams to assist residents who choose the “shelter-in-place” option so they can remain on their properties.
- Maintain situational awareness.

### **3.2.7 Phase 2c (Intermediate Operations)**

**Operational Focus:** Develop and approve housing plan; transition to long-term planning and community recovery support.

#### **Critical Considerations**

- Recovery Support Function (RSF) agency representatives have not been identified by GovGuam, and there is no formal organizational structure for recovery planning currently in place.

### **Primary Actions**

- MCTF deactivates when it confirms essential services on Guam are restored to adequate levels of support and mass care services are no longer required.
- RSF leads activate their organizations for recovery planning and engage under the leadership of the Federal Disaster Recovery Coordinator (FDRC).

#### **3.2.8 Phase 3 (Recovery)**

**Operational Focus:** Community recovery.

### **Primary Actions**

- ESF #6 coordinates with ESF #11 and ESF #14 to support long-term recovery efforts for residents of Guam whose homes were destroyed.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- General Services Administration (GSA)
- U.S. Small Business Administration (SBA)
- U.S. Department of Health and Human Services (HHS)
- U.S. Department of Justice (DOJ)

#### **5.1.2 Territory**

- GHS/OCD
- GDOE

### **5.2 Support Agencies**

#### **5.2.1 Federal**

- U.S. Department of Agriculture (USDA)
- DOJ
- Department of Defense (DOD)

**5.2.2 *Territory***

- GPD
- Guam Housing and Urban Renewal Authority
- GUNG

**5.2.3 *Nongovernmental Organizations and Private Sector***

- Red Cross
- Guam Salvation Army
- Community Emergency Response Team (CERT)
- Community Assisted Policing Effort (CAPE)

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## Appendix C-6: Restore Essential Operations at the Port of Guam

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### 1 *Situation*

Apra Harbor is the only deep-water port in the Marianas and the largest U.S. deep-water port in the western Pacific and serves the island of Guam as well as surrounding islands. Over 90 percent of goods consumed on Guam are moved via ship through the port. The commercial Port of Guam is located within Apra Harbor and could sustain significant damage in a catastrophic typhoon, causing it to operate at a degraded level for 2 to 3 days following a catastrophic typhoon. In a worst-case scenario, the loss of all gantry cranes would result in loss of trans-shipment services because the cranes would create debris pier-side and would require the development of alternate port operations.

#### 1.1 *Background*

Apra Harbor is shared by the U.S. Naval Station (South Apra and Inner Harbor) and the Port of Guam's commercial port (North Apra). It is the trans-shipment hub for cargo supporting an estimated total population of 500,000 persons in 37 countries and areas in the western Pacific. It has been designated by the U.S. Department of Defense (DOD) as a Commercial Strategic Seaport, and DOD traffic represents a large portion of the port's overall operations.

There are four berths regularly used for commercial traffic and two additional berths that are managed by private companies involved in fuel service. There are four rail-mounted gantry cranes that are welded into place before a storm were to impact Guam. Recent Port of Guam modernization efforts have included installation of a dedicated fire suppression water tank and a concrete masonry unit wall, strengthening of building doors and shutters, an increase to the container storage yard, and the purchase of mobile screening equipment and other critical equipment.

### 2 *Purpose*

The purpose of this Appendix is to outline critical coordination activities through operations to restore essential operations at the commercial Port of Guam. Through a task force, transparency with other Port stakeholders and the response community is provided by the U.S. Coast Guard (USCG)—the lead federal agency for port restoration efforts—as lead forrestoration operations based on Maritime Transportation System Recovery Unit (MTSRU) priorities.

### 3 *Execution*

While the USCG is the federal authority responsible for oversight of marine transportation system (MTS) recovery, establishing a Port Task Force (Port TF) facilitates greater coordination and communications regarding the priorities and activities of the response and those managed under the authority of the Captain of the Port (COTP). In support of active port restoration activities, the Port TF will be activated and will be led by the USCG COTP or designee. The MTSRU will be assigned a Port TF liaison to ensure collaboration and information-sharing is transparent to both maritime operations and response operations that are aligned with the need for rapid assessment and restoration of port infrastructure (waterway, cargo handling, and bulk petroleum handling).

### **3.1 Concept of Operations**

Tasks and information associated with rapid assessment and restoration of port infrastructure and that are aligned with MTSRU priorities regarding waterways, cargo handling, bulk petroleum handling, and the establishment of alternate fuel capabilities will be shared in the Port TF led by the USCG and Port Authority of Guam (PAG).

The USCG has legal and regulatory authority over the waters and activities in the Port of Guam and port operations must be tightly coordinated in support of that authority. The joint territory/federal organization will benefit from forming a task force to share information and conduct crisis action planning.

During Phase 1b, the USCG and PAG partner to form the Port TF. As a future hybrid planning operations cell, the Port TF (whether physically or virtually) develops real-time collaboration and information sharing on Port of Guam restoration requirements and operations. Under the task force construct, MTSRU activities inform port restoration efforts and are prioritized by the COTP.

#### **3.1.1 Critical Considerations**

- There may be loss of crane capability, port operations, and trans-shipment services due to waterborne debris and damaged infrastructure.
- The port has a dedicated fire suppression water tank on site.
- The port has its own Prime Power plants.
- The port has a permitted temporary fuel facility that is not in use.
- Alternate berthing may be available in a DOD facility.
- The Northern Mariana Islands and Guam are “just in time” economies with minimal food stocks or commodity stocks warehoused on-island.
- There are commercial on-island resources for salvage operations.

#### **3.1.2 Assumptions**

- Route 11 into the port will be rendered impassable due to inundation and storm surge.
- As the federal lead for the port, the USCG COTP will designate a representative for the Port TF.
- Industry partners have contingency plans in place to continue cargo services to Guam should the Port of Guam be closed for more than 7 days.
- There is approximately 14 days of food on the island at any given time.

**3.1.3 Requirements**

**Table C-6-1: Operational Requirements**

Operational Requirements		
Task	Requirements	Resources
Clear Waterways	<ul style="list-style-type: none"> <li>▪ Survey waterways</li> <li>▪ Conduct pier assessments</li> <li>▪ Clear debris</li> </ul>	<ul style="list-style-type: none"> <li>▪ USCG</li> <li>▪ DOD</li> <li>▪ Commercial</li> </ul>
Cargo Handling	<ul style="list-style-type: none"> <li>▪ Supplement using “ship’s gear”</li> <li>▪ Prime Emergency Power available</li> </ul>	<ul style="list-style-type: none"> <li>▪ Port of Guam</li> <li>▪ Industry partnerships</li> </ul>
Fuel Operations	<ul style="list-style-type: none"> <li>▪ Survey fuel facilities</li> <li>▪ Establish alternate fuel depot</li> </ul>	<ul style="list-style-type: none"> <li>▪ USCG</li> <li>▪ DOD</li> <li>▪ Commercial/industry</li> <li>▪ PAG</li> </ul>

**Table C-6-2: Resource Requirements**

Resource Requirements	
Fuel Requirements	
Diesel Fuel Requirements	<ul style="list-style-type: none"> <li>▪ 10 generators with burn rate of 2,500 gallons per day</li> <li>▪ Port Police truck running 12 hours per day with burn rate of 30 gallons per 12 hours (60 gallons per day)</li> </ul>
Gasoline Fuel Requirements	<ul style="list-style-type: none"> <li>▪ 2 boats with burn rate of 200 total gallons per week</li> <li>▪ 4 Port Police SUVs running 24 hours per day with burn rate of 22 gallons per 24 hours</li> <li>▪ All other port vehicles running 8 hours per day with burn rate of 600 gallons per day</li> </ul>
Container Yard Heavy Equipment Diesel Fuel Requirements	<ul style="list-style-type: none"> <li>▪ All equipment (top lifters, fork lifts, tractors) with burn rate of 7,000 gallons per week</li> </ul>



<b>Resource Requirements</b>	
Backup Generators for Port Generators	<ul style="list-style-type: none"> <li>▪ Load Center 1 – 455KW Prime Power</li> <li>▪ Load Center 2 – 455KW Prime Power</li> <li>▪ Load Center 3 – 455KW Prime Power</li> <li>▪ Load Center 4 – 455KW Prime Power/725KW Prime Power</li> <li>▪ Load Center 5 – 500KW Emergency Power (3 units)</li> <li>▪ Gantry cranes – 900KW Emergency Power (3 units)</li> <li>▪ All other port vehicles running 8 hours per day, with burn rate of 600 gallons per day</li> </ul>
<b>Equipment Requirements</b>	
Heavy Equipment with Operators: <ul style="list-style-type: none"> <li>▪ Materials handling</li> <li>▪ Wheeled stock</li> <li>▪ Track equipment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Top lifters, bulldozer, backhoe, dump trucks, excavator</li> </ul>
<b>Facility Requirements</b>	
Backup Wharf Contingency Site and Upgrade Requirements <ul style="list-style-type: none"> <li>▪ Hotel wharf upgrade requirements to be operational</li> </ul>	<ul style="list-style-type: none"> <li>▪ Roadway repair leading to H Wharf</li> <li>▪ Reinforce pilings and structural integrity of the wharf</li> <li>▪ Repair and upgrade bollards, fenders, cleats, bull rail, dolphins</li> <li>▪ Mobile crane</li> <li>▪ Stevedoring and cargo checking schedule</li> <li>▪ Heavy equipment/transportation</li> <li>▪ Security fencing</li> <li>▪ Security lighting</li> <li>▪ Emergency power supply</li> <li>▪ Domestic and fire water supply</li> <li>▪ Containerized mobile office with portable restrooms</li> <li>▪ 24/7 manned security</li> <li>▪ Communications capability (Internet, lined and wireless)</li> </ul>
DOD-owned Wharfs	<ul style="list-style-type: none"> <li>▪ Availability to be coordinated through the EOC</li> </ul>

**3.1.4 Applicable Core Capabilities**

- Planning
- Public Information and Warning
- Operational Coordination

- Infrastructure Systems
- Fire Management and Suppression
- Critical Transportation
- Environmental Response/Health and Safety
- Logistics and Supply Chain Management
- Mass Care Services
- Operational Communications
- Public Health, Healthcare, and Emergency Medical Services
- Situational Assessment

### 3.2 Tasks by Phase

Response operations are organized into phases (see Base Plan). Each operational phase has an end state, as shown in Table C-6-.

**Table C-6-3: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Joint planning has begun by the activated Port TF, co-led by the USCG and PAG.
Phase 1c	The USCG <i>Heavy Weather Plan</i> has been executed and a liaison has been embedded in the MTSRU to communicate actions and priorities back to the UCG through the Operations Section.
Phase 2a	Initial assessments have been completed, all on-island resources have been deployed, and the Port TF actively executes priority actions set by the UCG.
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	Long-term recovery plans have been developed and are executed, with oversight from USCG and PAG.
Phase 3	PAG and Guam Homeland Security Office of Civil Defense (GHS/OCD) execute recovery activities.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

#### Critical Considerations

- Port operations are managed by PAG.

#### Primary Actions

- COTP and the Harbor Master review typhoon evacuation plans and maintain constant situational awareness on vessels berthed/moored in the seaport in order to effectively direct an evacuation, if necessary.

- Port of Guam coordinates with Guam Environmental Protection Agency (Guam EPA) and assesses hazardous materials (HAZMAT) requirements, protective measures, and response capabilities.
- Transportation Security Administration (TSA) maintains a list of personnel that possess Transportation Workers Identity Cards (TWICs).
- USCG and A.B. Won Pat International Airport Operations Division update and maintain their respective response plans.

### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** Prepare the port for storm impacts and increase coordination activities.

#### **Critical Considerations**

- Condition of Readiness (COR) 3 is a trigger for port operations to begin preparedness.

#### **Primary Actions**

- Move HAZMAT from the seaport to approved pre-determined storage site(s).
- PAG decreases the number of stacked shipping containers from five high to three high.
- Typhoon building preparation.
- Top off equipment, generators, and fuel tank.
- Once the declaration of COR 3 by the Governor is made and notification and communication protocols have been initiated, normal port operations will continue; port personnel, tenants, and stakeholders should begin to secure and store all loose materials in their respective areas.
- The Port Command Center will be activated by the Port of Guam General Manager. Division heads will prepare and secure work areas and equipment not required for emergency operations.
- The General Manager may stop receipt or delivery of cargo from the port any time during COR 3 after sufficient notice has been provided to shipping agents. All efforts will be made to allow adequate time for agents to notify customers of this impending action.
- The Harbor Master will advise all vessels berthed at the port, Pier F-1, Kaiser, Hotel, and Golf Piers to begin preparations for getting underway to sea.
- The Commercial Manager for the port will notify all tenants to prepare and secure their work areas and store all equipment and loose materials in a safe location. Notification will also be provided to marina tenants to secure, remove, or relocate their vessels from the marinas to the harbor of refuge.
- All vessels under 200 feet in length will be instructed to get underway as soon as possible. Vessels will be given ample time to obtain needed bunkers and supplies.
- No vessel will be allowed to stay in port without authorization from the COTP and the Harbor Master.

- Shipping agents with special requirements, such as container securing or shifting to other areas, will consult with the General Manager.
- Port Police and Harbor Master personnel will test and prepare all handheld radios and other communications equipment for emergency use.
- The Port of Guam General Manager, or designee, will prepare the situation status reports from the Port Command Center.

#### *Guam International Airport Authority (GIAA)*

- Initiate typhoon preparations at buildings.
- Ensure airport fuel storage is topped off.
- Initiate runway and runway lighting typhoon preparations.
- Top off generators and vehicles with fuel.
- GIAA/PAG begin notification of port tenants.

#### *USCG*

- Execute *Heavy Weather Plan* and *Mariana Islands Maritime Transportation System Recovery Plan* checklists.
- Communicate/coordinate Port Heavy Weather Condition (PWHC) to mariners, port partners, and port stakeholders via a Broadcast Notice to Mariners (BNTM), the USCG Alert Warning System, and conference calls.
- Communicate to vessels over 200 gross tons to start sortie preparations.
- Communicate to vessels over 200 gross tons that are unable to sortie to prepare mooring plans.
- Initiate harbor patrols to verify: commercial vessels in port, adequacy of vessel mooring, ongoing cargo operations, and hazardous materials in port.

### **3.2.3 Phase 1c (Near Certainty)**

**Operational Focus:** USCG dictates port closure, if needed, safety of mariners, and cessation of port operations.

#### **Critical Considerations**

- COR 2 is a trigger for PAG to close port operations. Only the USCG COTP decides when to close the Port of Guam.

#### **Primary Actions**

##### *GHS/ OCD*

- Continue to monitor all ongoing typhoon preparatory activity at the ports and coordinate any actions as required/requested.

### *PAG*

- The Harbor Master, in consultation with the COTP, will begin to sortie vessels greater than 200 gross tons out of the seaport.
- The Seaport Unified Command will complete actions to protect critical transportation and cargo movement resources.
- The Harbor Master, in consultation with the COTP, reviews mooring plans of vessels unable to sortie.
- Upon declaration of COR 2 by the Governor, all normal port operations will cease. Port Operations division heads will continue to prepare for the storm until all tasks outlined in the checklists have been completed.
- The Deputy General Manager for Port of Guam Operations or designee will release all nonessential personnel or personnel not specifically assigned to typhoon preparation tasks once emergency status instructions have been received by the General Manager from the GHS/OCD EOC.
- Emergency response personnel, supplies, materials, and equipment should be identified and readily available. Potable water should be stocked at the Port Command Center and other designated locations.
- All non-port personnel within port premises not engaged in emergency securing operations will be required to leave the area.
- All vessels over 200 feet in length will be required to depart the harbor as per USCG requirements. All vessels authorized to remain in the port will be offered a berth or an area to moor by the Harbor Master. Heavy weather mooring lines, wires, and cables will be provided by the vessel or agent, and securing of such vessels will be performed by its crew.
- All emergency vehicles will be deployed to pre-designated locations. Emergency road and debris cleaning equipment should be identified and deployed to their pre-designated locations. A water tanker should also be made available for emergency use.

### *GIAA*

- Secure loading bridges.
- Ensure all tenants are secured.
- Direct aircraft unable to sortie to secure inside hangers.

### *USCG*

- Execute *Heavy Weather Plan* and *Mariana Islands Maritime Transportation System Recovery Plan* checklists.
- Communicate/coordinate PHWC to mariners, port partners, and port stakeholders via a BNTM, the USCG Alert Warning System, and conference calls.
- Communicate to vessels over 200 gross tons to sortie.

- Communicate to vessels over 200 gross tons who are unable to sortie to start mooring.
- Initiate harbor patrols to verify: commercial vessels in port, adequacy of vessel mooring, ongoing cargo operations, and hazardous materials in port.
- COTP will direct the closure of the seaport to all nonessential vessel movement and broadcast a BNTM stipulating the seaport closure.

#### **TSA**

- Facilitate passenger processing.

#### **Federal Aviation Administration (FAA)**

- Close the airfield.

### **3.2.4 Phase 2 (Incident and Incident Response)**

- The Port of Guam will remain closed until USCG COTP orders the port reopened.

### **3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)**

**Operational Focus:** Damage assessments, waterway assessments, HAZMAT/Oil assessments, and structural assessments.

#### **Critical Considerations**

- USCG leads all assessment activities, but does not oversee the mission to salvage.
- ESF #3 subject matter experts (SMEs) should be integrated into the Port TF to facilitate their work under Mission Assignments (MAs), in coordination with the USCG.

#### **Primary Actions**

- GHS/OCD will monitor all ongoing port restoration activity and coordinate any actions as required/requested.
- The Seaport Unified Command will coordinate and provide oversight on the underwater survey of channels, ship berthing/mooring areas, and harbor in order to identify hazards to navigation and determine port accessibility based on post-storm damage assessments.
- GHS/OCD, Guam DPW, the Debris Task Force (DTF), and PAG will coordinate to clear debris from Route 1 to Route 11 and ensure access to the seaport is available.
- GHS/OCD, PAG, and Port Police will coordinate with TSA for issuance of temporary TWICs to any augmenting seaport workforce.
- The Seaport Unified Command, through the MTSRU, will develop port recovery priorities.
- The Seaport Unified Command, through the MTSRU, will establish a priority of ships returning to the port if necessary.

### *PAG*

- Upon declaration of COR 4 by the Governor, the General Manager will activate the Port Incident Management Team (IMT). The team will perform a comprehensive damage assessment of all port facilities, equipment, and other assets and will comprise the following personnel:
  - Engineering Manager
  - Maintenance Manager
  - Safety Administrator
  - Public Information Officer
  - Procurement & Supply Manager
  - Supply Supervisor
  - Building Maintenance Superintendent
  - Equipment Maintenance Superintendent
  - Property Control Officer
  - Claims Officer
  - Representatives from:
    - Commercial Division
    - Strategic Planning Division
- The team will assess, document, and photograph all damage to port assets as a result of the storm. The team will be responsible for receiving damage reports from all divisions. Upon completion of the team's assessment, the General Manager will initiate response and recovery activities.
- Division Heads will survey and assess damages to their respective work areas. A copy of the Damage Assessment Form, along with estimated damage costs, will be submitted to the Damage Assessment Team.
- The Infrastructure Damage Assessment Form will be used to document all damages, including personnel attendance before, during, and after the storm for claim/reimbursement purposes on its submission to FEMA via the GHS/OCD. Division heads will be responsible for completing this form.
- Respective division heads will begin coordinating with the appropriate GovGuam agencies via the GHS/OCD EOC for immediate road clearance and debris management and removal activities.
- Port Police personnel will conduct security assessments of the physical infrastructure damage and prepare, if necessary, an amendment letter to the USCG identifying security deficiencies and how the port will mitigate those deficiencies until materials and supplies are obtained to repair and replace the damaged property.

- If COR 4 is declared on a weekday, all port employees will be required to report to work. However, if COR 4 is declared on a weekend, only essential personnel contacted by their division heads are required to report to work. All areas of the port will return to normal operations.
- Division Heads will be required to submit time management reports to the Finance and Administration Division for payroll and FEMA justification purposes.
- The Port Police Chief or designee will submit all receipts to substantiate petty cash issuance.

### *USCG*

- Conduct, coordinate, and provide oversight on the underwater survey of channels, ship berthing/mooring areas, and harbor in order to identify hazards to navigation and determine port accessibility based on post-storm damage assessments.
- Conduct a HAZMAT survey of the seaport in order to determine the ability to operate in and around the seaport environment.
- Coordinate and provide oversight for the restoration of seaport navigational aids, channel markers, etc.
- USCG issues a BNTM stipulating seaport status and any operational restrictions.
- Establish MTSRU.
- MTSRU coordinates with port partners and port stakeholders on current status and requirements.
- MTSRU develops port recovery priorities as follows:
  - General Recovery Priorities: Port Restoration
    - Waterways
    - Cargo Handling Facilities
    - Bulk Liquid Facilities
  - Cargo Priorities
    - Petroleum Products
    - Chlorine (as required)
    - Food
    - Medical
    - Construction Supplies
    - Other
- The MTSRU will establish a priority of ships returning to the port, if necessary.

### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

**Operational Focus:** Coordination of salvage and restoration of port operations.



### **Critical Considerations**

- Additional berthing is available at DOD facilities; however, Port Operations would need to develop a wharfing capability to support an alternate berth.
- Fuel needs.

### **Primary Actions**

- COTP directs the reopening of the seaport based on operational capability.
- USCG and PAG conduct a HAZMAT survey of the seaport to determine the ability to operate in and around the seaport environment.
- A.B. Won Pat International Airport Operations Division coordinates and directs the clearing of debris from the airport environment (runway, taxiways, aircraft parking areas, etc.).

#### **3.2.7 Phase 3 (Recovery)**

**Operational Focus:** Long-term restoration projects, including mitigation.

### **Critical Considerations**

- For purposes of this plan, an alternate wharfage capability has been identified, and the Port of Guam leads development with coordination with the USCG.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- USCG
- General Services Administration (GSA)
- FAA
- U.S. Department of Transportation (DOT)
- U.S. Maritime Administration (MARAD)

#### **5.1.2 Territory**

- GHS/OCD
- Guam GSA

- PAG

## **5.2 Support Agencies**

### **5.2.1 Federal**

- U.S. Department of Homeland Security (DHS)
- DOD

### **5.2.2 Territory**

- Guam National Guard (GUNG)

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## Appendix C-7: Distribute Essential Commodities and Initial Response Resources

### 1 *Situation*

The on-island distribution of commodities and other response resources is dependent upon the port being operational. It is also dependent upon roadways being cleared, which is the responsibility of Guam's Department of Public Works (DPW) and the Guam Homeland Security Office of Civil Defense (GHS/OCD). However, federal support is likely to be required for debris clearance efforts.

**Immediate Response Resources.** Over 90 percent of Guam's commodities arrive by sea. The largest commercial shipping company is Matson. It takes approximately 14 days for a container ship to travel from the continental United States (CONUS) to Guam. Through aggressive pre-deployment of select immediate response resources (IRR) and capabilities to Guam, the federal support plan ensures access to the full complement of approved federal assets and capabilities before a typhoon strike on Guam. At the discretion of the FEMA Region IX Regional Administrator (RA), these IRR may be moved in Phases 1b and 1c into or near Guam and released at the request of the Government of Guam (GovGuam).

**Essential Commodities.** FEMA Distribution Centers (DCs) located both inside and outside the continental United States (OCONUS) may supply essential commodities in support of mass care operations. These commodities (food, water, diapers, comfort kits, and tents), once requested by Guam, will be transported to Guam by FEMA for GHS/OCD distribution.

**Debris Clearance.** Immediately post-impact, first responders will require that roadways to critical facilities and essential services facilities be cleared of storm debris. Disaster survivors will also require clear and safe roadways in order to access and assess homes/property, obtain supplies, and assist their communities. Requested pre-deployed IRR or commodities will need to be moved to established distribution points as well.

A category 5 storm will generate a lot of debris, of which downed power poles and electrical power lines are of great concern. This hazard requires specialized labor to ensure the safety of the public. The Guam Power Authority (GPA) must work with first responders in the immediate aftermath of the storm to assess downed poles and lines and to ensure damaged power infrastructure is de-energized prior to being cleared from roadways.

#### 1.1 **Background**

Located conveniently near AB Won Pat International Airport, the Guam DC houses FEMA IRR. Under the operational control of the FEMA Headquarters (HQ) Logistics Management Directorate (LMD), two other OCONUS DCs and four CONUS DCs may also be used to provide resources for the response.

The Guam DPW has identified primary roads for post-impact debris removal. These primary roads will likely be affected by the loss of power infrastructure (poles, transformers, wires) and will require response support from electric utility crews for road clearing. The Guam DPW and Guam Power Authority (GPA) will coordinate to enable access for utility resotation and to also provide access to emergency facilities, shelter sites, and government facilities. Secondary route clearance and clearance of debris from private property adversely affecting the public's welfare

will be accomplished once primary routes are cleared. Low-lying areas are subject to wave run-up, causing sand and coastal debris to accumulate once waters recede and block primary and secondary roads. Heavy rains and damaging winds will also dislodge trees and power poles, which will require clearing and removal.

## **2 Mission**

Support movement of IRR into and around Guam pre- and post-typhoon impact to ensure essential commodities are available to disaster survivors and for response operations.

## **3 Execution**

### **3.1 Concept of Operations**

To facilitate distribution of essential commodities and IRR, two activities must be prioritized: (1) timely decision making to deploy the necessary resources to Guam pre-storm and safely house them in Phases 1b and 1c until deployed at Guam's request; and (2) clearing critical transportation corridors for access once the typhoon has struck.

#### **Immediate Response Resources**

At the discretion of the RA, select critical resources and capabilities will be deployed to Guam in Phases 1b and 1c. These resources are necessary to ensure execution of the strategies in this plan. Under specific objectives and referenced in Appendix X (Execution Checklist), resources and capabilities have been quantified and agreed upon as being so critical to immediate response needs (assessment, emergency power generation, providing mass care services) that they should be pre-deployed to assist Guam in its immediate response efforts post-impact.

#### **Essential Commodities**

Commodities such as prepackaged meals-ready-to-eat or water necessary to meet basic human needs are available from OCONUS and CONUS FEMA DCs. A limited amount of commodities will be "pushed" to Guam in Phase 1c, to meet immediate response needs. A thorough assessment of needs post-impact will inform future commodity packages sent to Guam. There are limited storage facilities available on Guam for great quantities of commodities, due to the nature of Guam's just-in-time-economy.

#### **Debris clearance**

Debris clearance is the pushing aside debris in order to provide unimpeded access for emergency vehicles. Debris removal will be managed by the joint Operations Section during the response. Clearance activities are prioritized in Phase 2a. GPA crews will accompany or lead Guam DPW crews, who have the responsibility for conducting debris clearance.

##### **3.1.1 Critical Considerations**

- FEMA HQ manages the FEMA DCs and will determine which physical facilities will support commodities distribution operations.
- Time and distance considerations will dictate the IRR and commodities being "pushed" to Guam in Phases 1b and 1c.

- There is limited capability within Guam for commodities storage, due to the few warehouses options capable of withstanding Category 5 storm impacts.

### 3.1.2 Assumptions

The Regional Response Coordination Staff (RRCS) will provide sufficient situational awareness for the FEMA Region IX RA to approve the deployment in Phase 1b and 1c of commodities and IRR.

### 3.1.3 Applicable Core Capabilities

- Planning
- Public Information and Warning
- Operational Coordination
- Infrastructure Systems
- Critical Transportation
- Environmental Response/Health and Safety
- Logistics and Supply Chain Management
- Operational Communications
- Situational Assessment

## 3.2 Tasks by Phase

Each operational phase has an end state, as shown in Table C-7-1.

**Table C-7-1: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	Incident Management Assistance Team (IMAT) plus critical Emergency Support Functions (ESFs) deployed to Guam.
Phase 1c	IRR and essential commodities “push” package approved by RIX RA and deployed.
Phase 2a	All primary routes assessed by Guam DPW for first responders and emergency vehicles
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	Select demobilization of teams.
Phase 3	Transition to recovery and mitigation operations.

### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

#### Critical Considerations

- There is no published plan in place for fixed points of distribution (PODs) where commodities and other resources may be distributed to the public. A POD plan should be developed.

### **Primary Actions**

- GHS-OCD/FEMA Logistics, in coordination with GHS/OCD partner agencies, assess commodity supply requirements for supporting populations affected by the typhoon as well as IRR needs for conducting response and recovery operations.
- GHS-OCD/FEMA Logistics and GHS-OCD/U.S. General Services Administration (GSA) coordinate with partner agencies and private vendors to source available on-island commodity supplies and IRR and to identify and prioritize possible locations for distribution and deployment.
- GHS-OCD/FEMA Logistics, in coordination with GHS-OCD/GSA, source and establish contracts with private vendors for available on-island commercial commodity supplies and IRR as well as distribution assets. Contracts must be de-conflicted to minimize resource competition.
- GHS-OCD/FEMA Logistics, in coordination with GHS-OCD/GSA, assess and modify any existing commodity supply/IRR resource or distribution contracts to ensure a clause is added to prioritize GHS/OCD and emergency/disaster response operations.
- GHS-OCD/FEMA Logistics, in coordination with other GHS/OCD partner agencies, maintain awareness of any established Emergency Management Assistance Compact (EMAC) agreement to augment current GHS/OCD commodity supplies/IRR or distribution capabilities.

#### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** Timely decision making in the Regional Response Coordination Center (RRCC) and deployment of the IMAT plus critical ESFs.

### **Critical Considerations**

- Hardened support facility is required for FEMA IMAT and ESF personnel and should be considered prior to deployment.

### **Primary Actions**

- ESF #7, in coordination with GHS/OCD and partner agencies, continues to assess on- and off-island public and private commodity supplies and IRR as well as distribution and storage capabilities.
- ESF #7 initiates and coordinates preparatory commodity and IRR distribution and storage activities to ensure the conduct of effective response and recovery operations and the continuation of essential services for the population of Guam.
- GHS/OCD, FEMA Logistics, and ESF #7 establish awareness on the current availability and operational readiness of on- and off-island public and private commodity supplies, IRR, and storage and distribution assets that can augment existing capabilities.
- ESF #7, in coordination with GHS/OCD and the Defense Coordinating Officer (DCO), establishes awareness on the availability and operational readiness of on-island U.S. Department of Defense (DOD) supply and resource distribution and storage assets.

- ESF #7, in coordination with GHS/OCD and FEMA Logistics, attempts to establish “first priority” use of private vendor distribution and storage assets for commodities and IRR post-impact.
- ESF #7 verifies that the Federal Staging Area (FSA) location(s) on Guam is available for activation, is capable of providing secure storage, and has the necessary loading capabilities for further distribution of commodities by truck to PODs and other identified locations.

### 3.2.3 *Phase 1c (Near Certainty)*

**Operational Focus:** Successfully receive resources “pushed” to Guam in Phase 1b and provide appropriate support facilities for those resources.

#### **Primary Actions**

- GHS/OCD ensures transportation and distribution asset protection measures are taken to ensure asset survivability once a typhoon strikes.
- ESF #7, in coordination with GHS/OCD, FEMA Logistics, GHS/OCD partner agencies, private vendors, EMAC partners, and the DOD (through the DCO), finalizes the availability and operational status of on- and off-island public and private commodity supplies/IRR as well as distribution and storage capabilities.
- ESF #7 confirms that the FSA location(s) on Guam is activated on a limited basis to ensure that sufficient assets are staged and the appropriate number of personnel are able to staff the FSA post-impact.
- GHS/OCD and FEMA Logistics ensure that the FSA(s) on Guam is (are) stocked with an initial 96-hour supply of commodities to enable 4 days of distribution of emergency supplies to roughly 8,000 citizens per day.
- GHS/OCD, FEMA Logistics, and ESF #7 ensure that sufficient storage exists to safeguard resources at the FSA(s) during a Category 5 typhoon.
- GHS/OCD confirms that the POD location(s) in each village is prepared to activate post-impact and the appropriate number of personnel are able to staff the POD once activated.

### 3.2.4 *Phase 2 (Incident and Incident Response)*

**Operational Focus:** Providing adequate support for distribution of IRR and essential commodities without overwhelming Guam by too large a federal footprint.

#### **Primary Actions**

- GHS/OCD, FEMA Logistics, and ESF #7 gain and maintain situational awareness regarding the number of PODs required. The designation of a POD is the responsibility of a village’s mayor. Staffing of the POD is the responsibility of the village mayor.
- GHS/OCD, FEMA Logistics, and the Unified Coordination Group (UCG) ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.



- GHS/OCD and the UCG confirm that the FSA location(s) on Guam is resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
- GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs activated post-impact and anticipate differing commodity demands at each POD based on damage assessments.
- GHS/OCD confirms that the POD location(s) identified in each village remains suitable post impact.
- GHS/OCD ensures that activated PODs submit and validate 48-hour needs forecasts on a daily basis.
- ESF #7, in coordination with GHS/OCD, FEMA Logistics, and other GHS/OCD partner agencies, establishes awareness of post-storm commodity and IRR requirements, commodity supply and IRR availability, and available distribution capabilities to support operational PODs.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, establishes awareness of any mobilized Guam National Guard (GUNG) or mission-assigned DOD distribution assets and integrates them into the overall distribution and storage effort.
- As needed, ESF #7, in coordination with GHS/OCD and FEMA Logistics, executes contracts with private vendors to augment existing capabilities through the use of commercial commodities, IRR, and distribution assets.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, establishes awareness of any EMAC agreement executed with a neighboring island for additional commodity supplies, IRR, and distribution assets/capabilities.
- ESF #7, as directed by GHS/OCD and FEMA Logistics, sources and contracts for additional neighbor-island commodity supplies, IRR, and distribution assets/capabilities.
- ESF #7, as directed by GHS/OCD and FEMA Logistics, sources and contracts with private on-island commodity vendors for additional commodity supplies, IRR, and distribution assets to meet commodity and response resource requirements.
- ESF #7, in coordination with GHS/OCD, FEMA Logistics, and other GHS/OCD agencies, maintains awareness of the operational readiness of potential on- or off-island commodity supplies, IRR, and distribution assets in order to augment existing capabilities if response requirements exceed initial capabilities.
- ESF #7 and GHS/OCD maintain visibility of all off-island and contract assets performing distribution missions and prepare to release assets as demand decreases.

### ***3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)***

#### **Primary Actions**

- GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs required.

- GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.
- GHS/OCD and the UCG confirm that the FSA location(s) on Guam is resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
- GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs activated post-impact and anticipate differing commodity demands at each POD based on damage assessments.
- GHS/OCD confirms that the POD location(s) identified in each village remains suitable post-impact.
- GHS/OCD ensures that activated PODs submit and validate 48-hour needs forecasts on a daily basis.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, establishes awareness of any mobilized GUNG or mission-assigned DOD distribution assets and integrates them into the overall distribution and storage effort.
- As needed, ESF #7, in coordination with GHS/OCD and FEMA Logistics, executes contracts with private vendors to augment existing capabilities through the use of commercial commodities, IRR, and distribution assets.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, establishes awareness of any EMAC agreement executed with a neighboring island for additional commodity supplies, IRR, and distribution assets/capabilities.
- ESF #7, as directed by GHS/OCD and FEMA Logistics, sources and contracts for additional neighbor-island commodity supplies, IRR, and distribution assets/capabilities.
- ESF #7, as directed by GHS/OCD and FEMA Logistics, sources and contracts with private on-island commodity vendors for additional commodity supplies, IRR, and distribution assets to meet commodity and response resource requirements.
- ESF #7, in coordination with GHS/OCD, FEMA Logistics, and other GHS/OCD agencies, maintains awareness of the operational readiness of potential on- or off-island commodity supplies, IRR, and distribution assets in order to augment existing capabilities if response requirements exceed initial capabilities.

### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

#### **Primary Actions**

- GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs required.
- GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.

- GHS/OCD and the UCG monitor FSA activities to ensure that the FSA(s) remains resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
- GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs in operation and anticipate differing commodity demands at each POD based on damage assessments.
- GHS/OCD confirms that the POD location(s) in each village remains viable for supporting the daily number of survivors and distribution equipment.
- GHS/OCD ensures that activated PODs submit and validate 48-hour needs forecasts on a daily basis.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, maintains awareness of all mobilized GUNG or mission-assigned DOD distribution assets supporting the response.
- ESF #7, in coordination with GHS/OCD and FEMA Logistics, maintains awareness of contracts with private vendors that are augmenting existing capabilities with commercial resources in support of the response.
- ESF #7, as directed by GHS/OCD and FEMA Logistics, maintains awareness of neighbor-island distribution resources supporting the response.
- ESF #7 and GHS/OCD maintain visibility of all off-island and contract assets performing distribution missions and prepare to release assets as demand decreases.

### **3.2.7 Phase 2c (Intermediate Operations)**

#### **Primary Actions**

- GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs required.
- GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.
- GHS/OCD and the UCG confirm the FSA location(s) on Guam is resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
- GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs in operation and anticipate differing commodity demands at each POD based on damage assessments.
- GHS/OCD ensures that PODs remaining open continue to submit and validate 48-hour needs forecasts on a daily basis.
- GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs being deactivated as private industry recovers.

- As required, ESF #7, in coordination with GHS/OCD and FEMA Logistics, ends contracts with private vendors providing support to distribution operations.
- As required, ESF #7 and GHS/OCD release off-island and contract assets performing distribution missions as demand decreases.

### **3.2.8 Phase 3 (Recovery)**

**Operational Focus:** Transition to recovery. Commodity distribution support is no longer required and all retail supply chains are restored.

#### **Primary Actions**

- Closeout and demobilization.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- GSA

#### **5.1.2 Territory**

- GHS/OCD

### **5.2 Support Agencies**

#### **5.2.1 Federal**

- DOD
- Department of Justice (DOJ)

#### **5.2.2 Territory**

- GHS/OCD
- Guam Department of Education (GDOE)
- Guam Memorial Hospital (GMH)
- GUNG

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## Appendix C-8: Re-establish Public Health and Medical Services at Critical Emergency Medical Facilities

### 1 *Situation*

Prior to the impact of a catastrophic typhoon, the healthcare system on Guam will experience a surge of patients. Guam hospitals (3) are supplemented with geographically located community health centers (CHCs) (one in the south and one in the north) and operate at a daily rate greater than 90 percent of capacity.

#### 1.1 **Background**

The U.S. Department of Health and Human Services (HHS) leads ESF #8 and coordinates resources in support of Guam during the response. The medical surge capability is resource intensive and requires significant physical materiel to travel with pre-designated teams. By careful and coordinated execution of transportation services with the FEMA Logistics Management Division (LMD), HHS and FEMA may realize operational benefit by sharing transportation resources.

### 2 *Mission*

The mission for re-establishing public health and medical services is to provide supplemental medical and public health capabilities to continue essential health services to Guam residents following a catastrophic typhoon.

### 3 *Execution*

#### 3.1 **Concept of Operations**

HHS coordinates movement of select critical resources to Guam pre-impact and maintains movement coordination control of all resources, preserving HHS's ability to contract for and use commercial carriers as required. This also allows HHS to manage movement of critical equipment and teams more efficiently, as mobilization for these resources are both from within the continental United States (CONUS) and outside CONUS (OCONUS). HHS communicates resource movement to the Regional Response Coordination Center (RRCC) through the Emergency Support Function (ESF) #8 representative in the RRCC. HHS will utilize and leverage existing FEMA-contracted capabilities at the Federal Staging Area (FSA) for onward movement and tracking purposes.

Additional resources will be phased in by HHS in Phases 1b and 1c, following the initial "push" of resources. In Phase 1b, HHS deploys specific resources, Disaster Medical Assistance Teams (DMATs) and their equipment, plus management teams to accompany FEMA's Incident Management Assistance Team (IMAT). In Phase 1c, a DMAT and associated medical assets will deploy from Hawaii to augment the on-island medical response capability and one CONUS DMAT will deploy to Hawaii in preparation for follow-on deployment to Guam, as needed. Additional CONUS DMATs may be placed on alert.

Following typhoon impact (Phase 2) and an assessment by the ESF #8 representative, Guam Memorial Hospital (GMH), U.S. Naval Hospital (USNH) Guam, and the Guam Regional Medical Center (GRMC) hospital will employ the Emergency System for Advance Registration

of Volunteer Health Professionals (ESAR-VHP) to identify additional medical resources. All hospitals will recall all available hospital staff to provide additional surge medical care capability within their facilities. Post-impact, aeromedical evacuation (AE) of sick and injured patients will be assessed and carried out on a case-by-case basis based on medical need.

### ***3.1.1 Critical Considerations***

- Hospital operation is normally at 90-percent capacity.
- Guam Department of Public Health and Social Services (DPHSS) does not have surge capacity.
- At Condition of Readiness (COR) 2, Guam issues messages for pregnant and vulnerable populations to seek shelter at hospitals.
- Previous major typhoons did not result in an increase in acute patients post-storm.
- Fatalities greater than 20 individuals (mass fatality) would require federal support.
- All hospitals and community health centers are hardened, with emergency power generators and 72 hours of fuel available.
- GMH has a fuel purchase contract in place with direct delivery.

### ***3.1.2 Assumptions***

- At COR 2, there will be a 20-percent surge requirement at medical facilities.
- Generators are on-island at the FEMA Distribution Center (DC) to support medical facilities if emergency power fails at hospitals. Given that the new GRMC hospital is now online, an assessment of the size/type of generator required to keep the hospital operational should be done by ESF #3.
- Guam Homeland Security Office of Civil Defense (GHS/OCD) requires an emergency contract for water trucks to deliver water if the Guam water systems cannot provide potable water. The capability to source, transport, and deliver water to hospitals is unknown.
- Local pharmacy capability and supply is unknown at this time, but it is anticipated that pharmacies will be overwhelmed during an emergency.
- Communications at clinics/hospital/dialysis centers is adequate, with no noted shortfalls.
- Buildings of opportunity for Federal Medical Stations (FMSs) are limited. This will result in applying federal resources to existing clinics and hospitals on-island.
- On-island veterinary support is limited and will require federal augmentation.
- On-island emergency medical services (EMS) transport services and refueling/staffing capabilities are adequate.
- Behavioral health providers on-island are limited and federal augmentation will be needed.

- The projected requirement for medical supplies/pharmaceuticals is unknown, but federal support is anticipated after 3 days.
- Health and safety waivers are required immediately upon notification of a credible threat.
- Blood product support is anticipated; however, sizes, types, and numbers are unknown.
- Based on previous responses (Super Typhoon Pongsona and Typhoon Chataan), medical field tents are susceptible to damage from follow-on storms and weather. There is a need for surge teams to work in hardened spaces. CNMI and Guam are often impacted by the same storms. The DMAT can set up in Micronesian Mall, as has been done in previous typhoons.
- The territory has only one medical examiner, who services all of Guam and CNMI. There is a shortfall in processing the deceased under normal circumstances and federal augmentation is anticipated.

### 3.1.3 Requirements

**Table C-8-1: Guam Medical Shortfalls and Federal Support Requirements**

Anticipated Shortfall	Federal Requirement
Emergency room decompression/medical surge (field hospital service/staffing)	Type 1 DMAT with focus on bariatric, pediatric, and cardiologic services; services to dialysis patients and pregnant women anticipated (approximately 50 persons)
Shelter monitoring	Medical Strike Team for support to Guam Fire Department emergency medical technician staff
CHC clinic support (North and South island locations)	2x Type 3 DMAT (approximately 20 persons each)
Pharmaceutical resupply	Pharm Cache, activate Emergency Prescription Assistance Program for 30 days
Behavioral health support	Behavioral Health Team (20-26 personnel)
Veterinary support for household pets	National Veterinary Response Team (NVRT) (6-8 personnel)
Blood bank support (no way to collect blood on-island)	Possible support
Lab support (diagnostics, personnel, monitoring vector-borne diseases)	Possible public health support

### 3.1.4 Applicable Core Capabilities

- Planning
- Public Information and Warning
- Operational Coordination



- Critical Transportation
- Environmental Response/Health and Safety
- Operational Communications
- Public Health, Healthcare, and Emergency Medical Services
- Situational Assessment

### 3.2 Tasks by Phase

Each operational phase has an end state, as shown in Table C-8-2.

**Table C-8-2: Operational Phases and End States**

Phase	End State
Phase 1a	Agencies have completed their preparedness activities.
Phase 1b	ESF #8 assessment/management capability deployed with IMAT to Guam.
Phase 1c	Strike teams and caches are deployed and safely sheltered at appropriate facilities.
Phase 2a	ESF #8 has determined additional requirements as a result of detailed assessments and Guam has submitted Requests for Assistance.
Phase 2b	All supplemental federal capabilities and resources are ordered and deployed to Guam.
Phase 2c	Select demobilization of teams.
Phase 3	Transition to recovery and mitigation operations.

#### 3.2.1 Phase 1a (Normal Operations)

**Operational Focus:** Situational awareness and preparedness.

- While all hospitals and CHCs have fuel and water for initial operations, there is no plan for sustained operations. This is particularly critical for the facilities involved in chronic care, especially with a large population on the island receiving dialysis.

#### Critical Considerations

- All hospitals and CHCs have backup generators that require fuel. All hospitals have contracts with fuel suppliers to receive fuel in an emergency.
- Primary dialysis on-island is performed by Guam Renal Dialysis Center. There are three centers with an estimated population of 300 patients. Each dialysis clinic has a backup generator with a 1,000-gallon fuel tank. The dialysis centers have a 900-gallon storage tank for purified water and a 3,000-gallon tank for unpurified tap water. It is estimated that the dialysis centers use 1,024 gallons of water per shift and operate three shifts per day. Enough water exists for one full day of operation.

#### Primary Action

- GHS/OCD develops and maintains a list of hardened facilities that can be used to shelter emergency personnel and assets arriving from Hawaii and CONUS.

### 3.2.2 *Phase 1b (Increased Likelihood)*

**Operational Focus:** ESF #8 activates and deploys critical assessment and management capability with the IMAT.

#### **Critical Consideration**

- Many medical professionals work in Guam under special visas, which may impact the capability for health centers/hospitals to provide essential medical services.

#### **Primary Actions**

- Activate and deploy ESF #8 to the RRCC.
- Activate and deploy ESF #8 Regional Emergency Coordinators (RECs) with the FEMA IMAT.
- Deploy Incident Response Coordination Team-Advance (IRCT-A) cache from California to Guam.
- Deploy Very Small Aperture Terminal (VSAT) capability.
- Guam surges or augments staff in anticipation of receiving pregnant and medical needs patients in Phase 1c.
- FEMA deploys the IMAT.

### 3.2.3 *Phase 1c (Near Certainty)*

**Operational Focus:** Receipt of modified teams and medical cache to Guam. HHS has coordinated reception and safe housing of teams and materiel at the hospitals and CHCs receiving the surge staff.

#### **Critical Considerations**

- Pregnant and vulnerable populations are urged by Guam to evacuate to hospitals for care once COR 2 has been issued.

#### **Primary Actions**

- DMAT deploys to Guam.
- Deploy two (2) HHS Medical Task Forces to support northern and southern CHCs.
- Deploy IRCT-A cache from California to Guam.
- Deploy two (2) Logistics Response Assistance Teams (LRATs) from Hawaii to Guam.
- GMH transfers non-critical patients to skilled nursing facilities to create capacity.
- Humanitarian Assistance Rapid Response Team (HARRT) (rapid response team) personnel to assist at alternate care facilities (ACFs), as needed.
- Hospitals coordinate with GHS/OCD and the Department of Defense (DOD) to notify/alert medical staff (ESAR-VHP, USNH, GMH, GRMC) identified for possible recall.

- ESF #8 alerts and coordinates with ESAR-VHP hospitals and determines availability of ESAR-VHP personnel, as needed.

### **3.2.4 Phase 2 (Incident and Incident Response)**

**Operational Focus:** Provide surge capability, decompress hospitals, and provide supplemental chronic care. Mass fatalities due to the storm's impact are not expected.

#### **Critical Considerations**

There is expected to be a significant surge at hospitals that historically are places of refuge for medical needs persons during storm events. The decompression of hospitals along with appropriate staffing support, in recognition that hospital personnel will also be impacted by the storm, is the overarching focus of medical response.

### **3.2.5 Phase 2a (Activation, Situational Assessment, and Movement)**

**Operational Focus:** Assessment and triage.

#### **Primary Actions**

- GMH transfers or releases non-critical patients to skilled nursing facilities to create capacity.
- ESF #8, in coordination with Guam stakeholders, determines extent of Guam Behavioral Health Team resources and presents plan to Unified Coordination Group (UCG) for approval.
- ESF #8 determines status of pharmacies and whether to activate Pharm Cache.
- ESF #8 determines requirements for mobile lifesaving kit augmentation.
- ESF #8 determines need for any resources activated and held on CONUS/OCONUS for deployment.
- Based on initial assessments post-impact, ESF #8 alerts and deploys additional medical needs shelter teams; additional medical staff; and veterinary, surgical, radiological, and dialysis support, as needed.
- Based on initial assessments post-impact, ESF #8 increases, as needed, casualty care space through the use of a DMAT/FMS and/or additional ACFs for patients requiring acute medical treatment and 24-hour care.
- ESF #8 assesses and initiates resource procurement of additional medical supplies and pharmacological support.
- Based on initial assessments post-impact, ESF #8 deploys the NVRT to provide medical services and support to pets/service animals at the Ordot-chalan Pago Elementary Pet Shelter.
- ESF #15, through the Joint Information Center (JIC), disseminates public service announcements (PSAs) to residents and visitors regarding ongoing and planned medical response activities.

### **3.2.6 Phase 2b (Employment of Resources and Stabilization)**

**Operational Focus:** Sustained decompression of the Guam healthcare system to return it to normal operations.

#### **Primary Actions**

- Guam healthcare system discharges noncritical patients from hospitals and skilled nursing facilities to restore capacity.
- ESF #8 prepares a demobilization plan for their resources—DMATs and FMSs; deployed medical needs shelter teams; additional medical staff; and veterinary, surgical, radiological, and dialysis support—as needs decrease.
- ESF #15, through the JIC, disseminates PSAs to residents and visitors regarding ongoing and planned medical response activities.

### **3.2.7 Phase 2c (Intermediate Operations)**

**Operational Focus:** Transition to recovery.

#### **Primary Actions**

- Guam healthcare system returns to pre-storm staffing levels.
- ESF #8 redeploys all federal surge resources from Guam back to their home stations.
- UCG demobilizes DMAT(s), the Incident Support Team, and the IRCT.
- UCG demobilizes any regional medical personnel brought in for the medical response.
- UCG demobilizes and redeploys the FMS(s) back to its place of origin.
- UCG coordinates the return of any patients and patient support personnel evacuated from Guam pre-impact.
- UCG coordinates with ESF #8 to re-establish normal medical care activities.
- UCG stands down security personnel at ACF(s)/medical needs shelter(s).
- UCG conducts demobilization procedures in accordance with the demobilization plan.
- ESF #15, through the JIC, disseminates PSAs to residents and tourists regarding the standing down of all ACFs.

### **3.2.8 Phase 3 (Recovery)**

**Operational Focus:** Transition to recovery.

## **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Primary Agencies**

#### **5.1.1 Federal**

- FEMA
- HHS

#### **5.1.2 Territory**

- GHS/OCD
- Guam DPHSS

### **5.2 Support Agencies**

#### **5.2.1 Federal**

- DOD
- U.S. Department of Justice (DOJ)
- U.S. General Services Administration (GSA)

#### **5.2.2 Territory**

- GMH
- GRMC
- Guam National Guard (GUNG)

## Appendix C-9: Environmental Response/Health and Safety

### 1 *Situation*

A catastrophic typhoon strike on Guam has the potential to create widespread hazardous material (HAZMAT) or oil spills, resulting in extensive assessment, response, and disposal requirements. Oil is not a hazardous material; however, it is regulated as a pollutant under the National Contingency Plan (NCP). The U.S. Coast Guard (USCG) is the federal agency responsible for a release of oil or hazardous materials to the navigable waters of the United States; the U.S. Environmental Protection Agency (EPA) has that responsibility for releases of oil or hazardous materials to the inland areas of Guam. Such efforts may occur concurrent to disaster response efforts and should be coordinated so both chains of command have visibility on resources, capabilities, and requirements.

### 2 *Mission*

The environmental response/health and safety mission supporting a catastrophic response, sees appropriate measures taken that protect the health and safety of the public and responders, as well as the environment, from all hazards.

The purpose of this appendix is to present information on capabilities and resources in Guam for hazardous materials response efforts.

### 3 *Execution*

#### 3.1 *Concept of Operations*

The Guam Environmental Protection Agency (Guam EPA) serves as the territorial lead agency for ESF #10 in Guam. USCG Sector Guam is the ESF #10 federal lead agency in Guam. All marine responses will be led and coordinated by the USCG under their emergency response authorities. All organizations will provide an ESF #10 liaison to the joint operation to provide the status of efforts, define requirements, and share information on capabilities that are deployed or employed. Federal coordination will be initiated in Phase 1c at the Regional Response Coordination Center (RRCC), unless a specific request for deployment with the Incident Management Assistance Team (IMAT) to Guam is approved by the Regional Administrator (RA) in Phase 1b.

The lead federal agencies will inform and coordinate with the joint response operation and—

- Conduct assessments and disseminate guidance and resources;
- Deploy HAZMAT teams that support environmental health and safety actions; and
- Assess, monitor, and perform environmental cleanup.

##### 3.1.1 *Critical Considerations*

- The Guam Homeland Security Office of Civil Defense (GHS/OCD) is the lead agency for consequence management, including the response to HAZMAT or other incidents requiring environmental response.
- Environmental response may include oil response.

- If environmental response is the consequence of terrorism and weapons of mass destruction (WMD), refer to the appropriate Guam Comprehensive Emergency Management Plan (CEMP) annex for further information.

**3.1.2 Assumptions**

- National Guard WMD/Terrorism Response Team assets are available and will be deployed on Guam to support initial response activities.

**4 Administration, Resources, and Funding**

**4.1 Administration**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

**4.2 Resources**

**Table C-9-1: Federal Environmental Response/Health and Safety Capabilities and Assets**

Federal Environmental Response/Health and Safety Capabilities and Assets	
Organization	Capability/Asset
Environmental Protection Agency (EPA)	The EPA responds to accidents and terrorist attacks. Response is generally carried out in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. ESF #10 actions include the responsibility to “detect and assess the extent of contamination (including sampling and analysis and environmental monitoring).”
	<b>Federal On-Scene Coordinators (FOSCs):</b> Direct EPA response activities. At the tactical level within the on-scene Incident Command or Unified Command, the FOSC carries out EPA responsibilities under the NCP to coordinate, integrate, and manage overall response efforts. EPA FOSCs are supported by specialized teams and contractor resources. EPA Region IX FOSCs are located in Carson City (NV), San Francisco (CA), Los Angeles (CA), and Phoenix (AZ).
	<b>National Response Team (NRT):</b> An organization of federal departments and agencies responsible for coordinating emergency response to oil and hazardous substance pollution incidents. The NRT provides technical assistance, resources, and coordination on response and recovery activities for emergencies involving hazardous substances, oil, and weapons of mass destruction and other environmental incidents. <a href="http://www.nrt.org/">http://www.nrt.org/</a>
	<b>Regional Response Teams (RRTs):</b> Responsible for planning and coordination of regional coordination of response actions in support of the FOSC.  Region IX Regional Response Team – California, Nevada, Arizona <a href="https://www.nrt.org/site/region_list.aspx?region=9">https://www.nrt.org/site/region_list.aspx?region=9</a>

<b>Federal Environmental Response/Health and Safety Capabilities and Assets</b>	
<b>Organization</b>	<b>Capability/Asset</b>
	<p>Oceania Regional Response Team – Hawaii, Guam, American Samoa, and Mariana Islands <a href="http://www.oceaniarrt.org/go/doc/3911/2573134/">http://www.oceaniarrt.org/go/doc/3911/2573134/</a></p>
	<p><b>Chemical, Biological, Radiological, and Nuclear (CBRN) Consequence Management Advisory Team (CBRN CMAT):</b> Provides scientific and technical expertise for all phases of CBRN consequence management and is available to support FOSCs 24/7. Working closely with the EPA's special teams, National Homeland Security Research Center, and other federal agencies and research organizations, CMAT provides scientific support and technical expertise specifically for characterization, clearance, and waste management of:</p> <ul style="list-style-type: none"> <li>▪ Buildings and building contents;</li> <li>▪ Public infrastructure (including wastewater/drinking water systems, chemical plants, power plants, food processing facilities, and mass transit facilities, e.g., airports, bus and subway systems); and</li> <li>▪ Agricultural and associated environmental media (air, soil, and water).</li> </ul> <p>Specialized expertise and cutting-edge response assets, such as Airborne Spectral Photographic Environmental Collection Technology and Portable High-Throughput Integrated Laboratory Identification System (PHILIS), are available to assist local, national, and international agencies supporting hazardous substance response and remedial operations, including incidents of national significance.</p>
	<p><b>Environmental Response Team (ERT):</b> A group of EPA technical experts who provide assistance at the scene of hazardous substance releases, with expertise in such areas as treatment, biology, chemistry, hydrology, geology, and engineering. <a href="http://www.epaosc.org/">http://www.epaosc.org/</a></p>
	<p><b>National Counter-Terrorism Evidence Response Teams:</b> Specialized evidence response teams for the EPA that are trained in forensic evidence preservation and collection in a contaminated environment for a wide range of hazardous materials. There are teams in Colorado and Washington, D.C.</p>
<b>U.S. Coast Guard (USCG)</b>	<p><b>National Strike Force (NSF):</b> Provides personnel and specialized equipment to USCG and other federal agencies to facilitate preparedness for and response to oil and hazardous substance pollution incidents in order to protect public health and the environment. The NSF's area of responsibility covers all USCG districts and federal response regions. The NSF includes the National Strike Force Coordination Center in Elizabeth City, NC; the Atlantic Strike Team; the Gulf Strike Team, the Pacific Strike Team (PST); and the Public Information Assist Team (PIAT).</p>



Federal Environmental Response/Health and Safety Capabilities and Assets	
Organization	Capability/Asset
	<p><b>Pacific Strike Team (PST):</b> An asset that deploys with specialized equipment. Team is located in Novato, CA – (415) 883-3311.</p>
	<p><b>Air-Deployable Hazardous Material Response Trailer (ADHMT):</b> A “Level A” chemical response trailer that houses all chemical response gear and is self-sustaining for 1 to 3 days. The Atlantic Strike Team and Gulf Strike Team have this capability.</p>
	<p><b>Hazardous Material Response Trailer (HMRT):</b> Trailer that houses all chemical response gear required for sustaining a response for 3 to 4 days. It is road-deployable anywhere within the continental United States (CONUS) without need of special permits and can be deployed by aircraft. Each strike team has one HMRT.</p>
	<p><b>Public Information Assist Team (PIAT):</b> Provides unique, interagency crisis communication experience and technical expertise to help Incident Commanders and FOSCs. The PIAT brings a response kit to every incident that includes tools that are needed to accomplish the PIAT’s mission, such as news release distribution, photography, videography and recording television news broadcasts for media analysis and documentation. The PIAT is part of the NSF and is co-located with the National Strike Force Coordination Center in Elizabeth City, N.C. – (252) 331-6000.</p>
<p><b>DHS National Biosurveillance Integration Center (NBIC)</b></p>	<p><b>National Biosurveillance Integration Center (NBIC):</b> Under the DHS Office of Health Affairs (OHA), the NBIC is responsible for:</p> <ul style="list-style-type: none"> <li>▪ Rapidly identifying, characterizing, localizing, and tracking a biological incident of national concern;</li> <li>▪ Integrating and analyzing data relating to human health, animal, plant, food, water, and environmental domains;</li> <li>▪ Disseminating alerts and pertinent information; and</li> <li>▪ Overseeing development and operation of the National Biosurveillance Integration System (NBIS) interagency community, which provides constant situational awareness and assessments.</li> </ul>
<p><b>National Nuclear Security Administration (NNSA)</b></p>	<p><b>Accident Response Group (ARG):</b> Response element that is composed of scientists, technical specialists, crisis managers, and equipment ready for short-notice dispatch to the scene of a nuclear weapons accident.</p>
	<p><b>Aerial Measuring System (AMS):</b> Characterizes ground-deposited radiation from aerial platforms. These platforms include fixed-wing and rotary-wing aircraft with radiological measuring equipment, computer analysis of aerial measurements, and equipment to locate lost radioactive sources, conduct aerial surveys, or map large areas of contamination.</p>

Federal Environmental Response/Health and Safety Capabilities and Assets	
Organization	Capability/Asset
	<p><b>Federal Radiological Monitoring and Assessment Center (FRMAC):</b> Coordinates federal offsite radiological monitoring and assessment activities for nuclear accidents or incidents. FRMAC is responsible for providing a single source of compiled, quality-controlled monitoring and assessment data to the lead federal agency involved in the incident response.</p>
	<p><b>National Atmospheric Release Advisory Center (NARAC):</b> NARAC is a computer-based emergency preparedness and response predictive capability. NARAC provides real-time computer predictions of the atmospheric transport of material from radioactive releases.</p>
	<p><b>Radiological Assistance Program (RAP):</b> Provides advice and radiological assistance for incidents involving radioactive materials that pose a threat to public health and safety or the environment. RAP can provide field-deployable teams of health physics professionals equipped to conduct radiological search, monitoring, and assessment activities.</p>
	<p><b>Radiation Emergency Assistance Center/Training Site (REAC/TS):</b> Provides medical advice, specialized training, and onsite assistance for the treatment of all types of radiation exposure accidents.</p>
	<p><b>Nuclear Emergency Support Team (NEST):</b> Provides technical assistance to a lead federal agency to deal with incidents that involve the use of nuclear materials. NEST addresses threats by domestic and foreign terrorists that may employ WMD. NEST assists in the identification, characterization, rendering safe, and final disposition of any nuclear weapon or radioactive device.</p>

## 5 Oversight, Coordinating Instructions, and Communications

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

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## Appendix C-10: Fire Management and Suppression

### 1 *Situation*

For Emergency Support Function (ESF) #4 (Firefighting), the Guam Homeland Security Office of Civil Defense (GHS/OCD) Emergency Operations Center (EOC) coordinates directly with the ESF #4 coordinator at the GHS/OCD EOC.

Joint Region Marianas (JRM) fire assets belong to the Department of Defense (DOD) and do not fall under the ESF construct. JRM assets are available to the Government of Guam (GovGuam) via a memorandum of understanding (MOU).

The Guam Fire Department (GFD) is the lead ESF #4 Coordinating Agency.

### 2 *Mission*

Management or suppression of fires of all types, kinds and complexities, whether structure, wildland or fires which require specialized firefighting capabilities will protect the lives, property, and the environment during the response and recovery following a catastrophic typhoon.

### 3 *Execution*

#### 3.1 *Concept of Operations*

GFD is the lead ESF #4 Coordinating Agency on Guam and integrates within the joint response structure at the GHS/OCD EOC during Phase 1a and maintains a presence in the EOC until Phase 2c or until properly relieved.

GFD coordinates support for the detection and suppression of fires in wildland, urban, and rural settings and maintains sufficient capability to conduct search and rescue (SAR) missions with the Guam Police Department (GPD).

##### 3.1.1 *Critical Considerations*

- Public safety employees who are also members of the Guam National Guard (GUNG) will remain serving in their public safety roles during a disaster on Guam.
- GFD has an MOU with JRM, dated 29 December 2015, to provide personnel and equipment required for the protection of life and property from fire hazards. Firefighting and suppression activities include: emergency services such as basic and advanced life support; hazardous material (HAZMAT) containment and confinement; special rescue events involving vehicular and water mishaps; trench, building, and confined space extractions; and fire prevention/public education.
- The Aircraft Rescue and Firefighting (ARFF) Division at A. B. Won Pat International Airport maintains an MOU with the Andersen Air Force Base (AFB) Crash Rescue Unit.
- GFD relies on U.S. Navy helicopter squadron HSC-25 rotary-wing assets, which are used for water drops and medical evacuation (MEDEVAC). HSC-25 has two helicopters available.

- U.S. Air Force (USAF) fire assets bring a security detail with them as part of their standard operating procedure (SOP) when responding to mutual aid calls for service outside a military installation.
- Naval Base Guam staffs three medical units and two backup medical units.
- The Andersen AFB Fire Unit will receive an additional 16 civilian firefighters at the end of FY17.
- Andersen AFB staffs two medical units and two backup medical units.

#### 4 Administration, Resources, and Funding

**Table C-10-1: Firefighting Resources on Guam**

Guam Firefighting Resources	
Agency	Resources
<b>Guam Fire Department</b>	<ul style="list-style-type: none"> <li>▪ 270 firefighters</li> <li>▪ 21 emergency medical technicians</li> <li>▪ 20 HAZMAT-trained staff up to the technician-level</li> <li>▪ 19 ambulances</li> <li>▪ 10 fire stations</li> <li>▪ 8 fire trucks</li> <li>▪ 1 air trailer (Mobile Cascade System)</li> <li>▪ 1 HAZMAT trailer</li> <li>▪ 2 rescue boats, 20' (Hagatna, Agana stations)</li> </ul>
<b>Guam Department of Agriculture – Wildland Fire</b>	<ul style="list-style-type: none"> <li>▪ 15 firefighters</li> <li>▪ 2 Dually pickup trucks w/ 120-gal tanks</li> <li>▪ 2 4x4 trucks</li> <li>▪ 1 4x4 SUVs</li> <li>▪ 1 2x4 SUV</li> <li>▪ 4 ATVs</li> </ul>
<b>Guam Airport Aircraft Rescue Firefighting (AARF) Division</b>	<ul style="list-style-type: none"> <li>▪ 28 firefighters</li> <li>▪ 1 fire station</li> </ul>

**Table C-10-2: Joint Region Marianas Firefighting Resources**

Joint Region Marianas Firefighting Resources Available via MOU	
<b>Andersen AFB Fire</b>	<ul style="list-style-type: none"> <li>▪ 20 civilian firefighters</li> <li>▪ 48 military firefighters</li> <li>▪ 4 fire stations</li> <li>▪ 3 750-gal pump trucks</li> <li>▪ 1 2,000-gal tanker truck</li> <li>▪ 1 4,000-gal tanker truck</li> <li>▪ 4 crash trucks, 3,000 gal</li> <li>▪ 1 crash truck, 1,500 gal</li> <li>▪ 4 ambulances</li> <li>▪ 1 40' HAZMAT trailer</li> <li>▪ 2 command vehicles</li> <li>▪ 5 pairs of jet skis w/trailers</li> <li>▪ 12,000 gal of water on-hand</li> </ul>
<b>Naval Base Guam Fire</b>	<ul style="list-style-type: none"> <li>▪ 1 ladder truck</li> <li>▪ 5 engine companies</li> <li>▪ 2 spare engine companies</li> <li>▪ 1 special operations unit (heavy rescue)</li> <li>▪ 1 Dually pickup truck (forestry)</li> <li>▪ 1 ATV w/pump</li> <li>▪ 1 engine company (consists of 4 firefighters and 1 pump truck with 750 gal of water)</li> </ul>
<b>HSC-25</b>	<ul style="list-style-type: none"> <li>▪ 2 MH-60S Seahawk helicopters with fire buckets</li> </ul>

## **5 Oversight, Coordinating Instructions, and Communications**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

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## Appendix C-11: Mass Search and Rescue Operations

### 1 *Situation*

Typhoons impacting Guam have not historically resulted in requirements for the Mass Search and Rescue Operations Core Capability. This may be partially attributed to the hardening of the infrastructure in Guam against typhoon winds.

#### 1.1 **Background**

Search and rescue (SAR) operations help locate, rescue, and provide aid to stranded, lost, trapped, or isolated survivors. The Mass Search and Rescue Operations Core Capability delivers traditional and atypical SAR capabilities, including personnel, services, animals, and assets to survivors in need, with the goal of saving the greatest number of endangered lives in the shortest timeframe possible.

A catastrophic typhoon affecting Guam is a “notice” event and, in the days leading up to typhoon landfall, the Guam Homeland Security Office of Civil Defense (GHS/OCD) and other territorial agencies will take a series of precautionary steps to prepare. These steps include issuance of storm warning information to encourage the public to seek shelter that is capable of surviving the typhoon’s effects. Any required SAR operations are likely to be conducted within Phase 2a.

### 2 *Mission*

Flooding, inundation or collapse of buildings or other structures may require mass search and rescue operations to save the greatest number of endangered lives in the shortest time possible using traditional or atypical search and rescue capabilities including personnel, services, animals or other assets to survivors in need.

### 3 *Execution*

#### 3.1 **Concept of Operations**

***3.1.1 The Guam Police Department (GPD) is the lead territorial agency with responsibility for SAR operations. FEMA headquarters (HQ) activates Emergency Support Function (ESF) #9 when supplemental SAR capabilities are required. ESF #9 coordinates federal Urban Search and Rescue (US&R) assets to support SAR activities in the response, which may include maritime, coastal, waterborne, and land SAR. Federal Support***

FEMA HQ will alert ESF #9, which oversees the National US&R Response System, when a significant incident has occurred or may occur. ESF #9 makes an assessment of the situation and then makes a recommendation to senior leaders on SAR resource activation and deployment. Based on historical data, there is not currently any anticipated requirement for supplemental federal SAR resources.



## 4 Administration, Resources, and Funding

**Table C-11-1: Guam SAR Resources**

<b>Guam Search and Rescue (SAR) Resources</b>	
<b>Agency</b>	<b>Resource</b>
<b>Private Sector</b>	<ul style="list-style-type: none"> <li>▪ Volunteer search dogs</li> </ul>
<b>Guam Fire Department</b>	<ul style="list-style-type: none"> <li>▪ Rescue 1 (land)</li> <li>▪ Rescue 2 (waterborne)</li> <li>▪ Rescue 3 (land/waterborne)</li> </ul>
<b>Guam Airport Aircraft Rescue/Firefighting (ARFF) Division</b>	<ul style="list-style-type: none"> <li>▪ Aviation fire/rescue</li> <li>▪ 28 firefighters</li> </ul>
<b>Guam Police Department Marine Patrol</b>	<ul style="list-style-type: none"> <li>▪ 1 31' SAFE boat</li> <li>▪ 1 33' Brunswick 1000 Impact boat</li> <li>▪ 2 pairs of jet skis</li> <li>▪ 6 water/rescue certified divers</li> </ul>
<b>Guam Department of Agriculture</b>	<p>Fish &amp; Game</p> <ul style="list-style-type: none"> <li>▪ 1 27' Boston Whaler</li> <li>▪ 2 pairs of jet skis</li> <li>▪ 3 ATVs</li> <li>▪ 1 4x4 SUV</li> <li>▪ 4 4x4 pickup trucks</li> </ul> <p>Forestry</p> <ul style="list-style-type: none"> <li>▪ 2 4x4 pickup trucks</li> <li>▪ 1 4x4 SUV</li> <li>▪ 4 ATVs</li> </ul>
<b>Guam Customs</b>	<ul style="list-style-type: none"> <li>▪ 1 SAFE boat</li> <li>▪ 2 pairs of jet skis</li> </ul>
<b>Andersen AFB</b>	<ul style="list-style-type: none"> <li>▪ 5 pairs of jet skis</li> </ul>
<b>HSC-25</b>	<ul style="list-style-type: none"> <li>▪ 12 MH-60S Seahawk helicopters (typically two aircraft available on-island)</li> </ul>
<b>USCG Sector Guam</b>	<ul style="list-style-type: none"> <li>▪ 3 Coast Guard Cutters (Assateague, Sequoia, and Washington)</li> </ul>

**Table C-11-2: Federal SAR Capabilities and Assets**

<b>Federal Search and Rescue (SAR) Capabilities and Assets</b>	
<b>Organization</b>	<b>Capability/Asset</b>
<b>ESF #9</b>	ESF #9 is composed of four primary agencies (FEMA, USCG, Department of the Interior/National Park Service [DOI/NPS], and the U.S. Department of Defense [DOD]), which provide SAR operations during incidents or potential incidents requiring a coordinated federal response.
<b>FEMA Urban Search and Rescue (US&amp;R)</b>	FEMA is the Primary Agency for US&R, including collapsed buildings and disaster areas.
<b>U.S. Coast Guard (USCG)</b>	USCG is the Primary Agency for maritime/coastal/waterborne SAR. The USCG develops, maintains, and operates rescue facilities for SAR in waters subject to U.S. jurisdiction.
<b>DOD (USAF) Air Force Rescue Coordination Center (AFRCC)</b>	DOD (USAF- AFRCC) provides SAR support in aviation-related incidents and provides aeronautical SAR.
<b>Department of Interior-National Park Service (DOI-NPS)</b>	NPS is the Primary Agency for land SAR operations. NPS specializes in backcountry, remote, undeveloped, rural, or roadless areas that require the use of specialized equipment to access.
<b>Federal Search &amp; Rescue Coordination Group (FSARCG)</b>	FSARCG is a coordinating group in which one member from each of the four ESF #9 Primary Agencies (FEMA, USCG, DOI/NPS, and DOD) is activated and deployed to plan and coordinate a federal SAR response in support of the Regional Response Coordination Center/Incident Management Team.
<b>US&amp;R Incident Support Team (IST)</b>	FEMA US&R ISTs provide coordination and logistical support to US&R task forces during emergency operations. They conduct needs assessments, provide technical advice and assistance to state, tribal, and local government emergency managers, coordinate US&R task forces, and provide US&R logistics support. There are three (3) IST teams composed of 27 initial personnel in the National US&R Response System.
<b>Federal US&amp;R Task Forces</b>	Federal task forces located in Region IX: <ul style="list-style-type: none"> <li>▪ <b>AZ-TF1:</b> Phoenix, AZ - Phoenix Fire Department</li> <li>▪ <b>CA-TF1:</b> Los Angeles, CA - LA City Fire Department</li> <li>▪ <b>CA-TF2:</b> Los Angeles County, CA - LA County Fire Department</li> <li>▪ <b>CA-TF3:</b> Menlo Park, CA - Menlo Park Fire Department</li> <li>▪ <b>CA-TF4:</b> Oakland, CA - Oakland Fire Department</li> <li>▪ <b>CA-TF5:</b> Orange County, CA - Orange County Fire Authority</li> <li>▪ <b>CA-TF6:</b> Riverside, CA - Riverside Fire Department</li> <li>▪ <b>CA-TF7:</b> Sacramento, CA - Sacramento Fire Department</li> <li>▪ <b>CA-TF8:</b> San Diego, CA - San Diego Fire Department</li> <li>▪ <b>NV-TF1:</b> Clark County, NV - Clark County Fire Department</li> </ul>

Federal Search and Rescue (SAR) Capabilities and Assets	
Organization	Capability/Asset
<b>Federal US&amp;R Task Forces</b>	<p>Federal US&amp;R task forces are structured to operate on the scene of an incident for up to 14 days. A US&amp;R task force is an all-hazards response organization that can perform SAR functions and provide medical care for survivors and task force members. There are 28 teams nationally that can deploy to Region IX. Each task force consists of two 35-person teams, four canines, and an equipment cache. All task force configurations are self-sufficient for the first 72 hours of operation. Equipment consists of an 84,000-pound equipment cache that can be configured to quickly deploy with the team.</p> <p><b>Type I Task Force</b> – Composed of 70 multi-faceted cross-trained specialist personnel and four (4) canines capable of conducting physical search and heavy rescue operations in damaged or collapsed reinforced concrete buildings. Task force can be divided into six (6) major functional elements (search, rescue, medical, HAZMAT, logistics, and planning) or two (2) 35-member task forces, allowing for rotation and relief of personnel and enabling round-the-clock SAR operations.</p> <p><b>Type II Task Force</b> (intermediate) – Currently under development.</p> <p><b>Type III Task Force</b> (referred to as Light Task Forces on some details) – Consists of 28 personnel (includes 2 HAZMAT personnel) with canine capability to respond to primarily weather-driven incidents where the requirements are physical and technical and require canine SAR in light, wood-frame construction. Such events typically include hurricanes, tornados, ice storms, and typhoons. The equipment cache is modified and the vehicle convoy is reduced to support light rescue operations and to allow rapid deployment and relocation as incident requirements change.</p>

## 5 Oversight, Coordinating Instructions, and Communications

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## Appendix C-12: On-scene Security, Protection, and Law Enforcement

### 1 *Situation*

Public safety is a local issue. When security requirements cannot be met by local law enforcement capabilities, additional support can be sought through territory assets such as the Guam National Guard (GUNG), provided in accordance with Title 32, mutual aid, or Emergency Management Assistance Compact (EMAC) agreements.

### 2 *Mission*

Provide law enforcement and related security and protection operations for people and communities impacted by a catastrophic typhoon, as well as those response personnel engaged in lifesaving and life-sustaining operations in response.

### 3 *Execution*

#### 3.1 *Concept of Operations*

Guam Emergency Support Function (ESF) #13 is activated in situations where public safety and security efforts are required. If territory and local capabilities are exceeded or specific capabilities unique to the federal government are deemed essential, federal-to-federal support is requested; ESF#13 coordinates resource requests. In a joint response, federal support can be provided in limited ways.

ESF #13 facilitates the coordination of public safety and security among federal, Guam, and local agencies, as well as among other ESFs, to ensure that communications and coordination processes are consistent with stated incident management missions and objectives. Additionally, ESF #13 may be tasked with force protection during response and recovery activities.

Department of Defense (DOD) assets cannot be used for law enforcement activities related to response and recovery operations on domestic soil but may be used to accomplish the movement of law enforcement personnel and equipment. A federal statute known as the Posse Comitatus Act forbids the use of Title 10 DOD resources in law enforcement activities. No such limitation exists on National Guard assets or the U.S. Coast Guard (USCG), which can support law enforcement activities.

##### 3.1.1 *Critical Considerations*

- A significant amount of the sworn officers (estimated at 40 percent) are law enforcement officers in other agencies and/or the GUNG.
- During a disaster, an existing agreement with the Governor precludes those police officers who are also in the GUNG from being mobilized with their National Guard units.
- This agreement does not apply to Guam Customs and Quarantine Agency employees or to Superior Court Marshalls; employees of these two agencies who also serve in the GUNG are expected to fulfill their military commitment if and when the GUNG is mobilized.

- Approximately 20 percent of Guam Police Department (GPD) staff is unavailable at any given time due to disability leave, annual leave, etc.
- Mutual aid agreements between agencies are not codified in writing; agreements are determined at the Guam Homeland Security Office of Civil Defense (GHS/OCD) Emergency Operations Center (EOC) on an as-needed basis.

## 4 Administration, Resources, and Funding

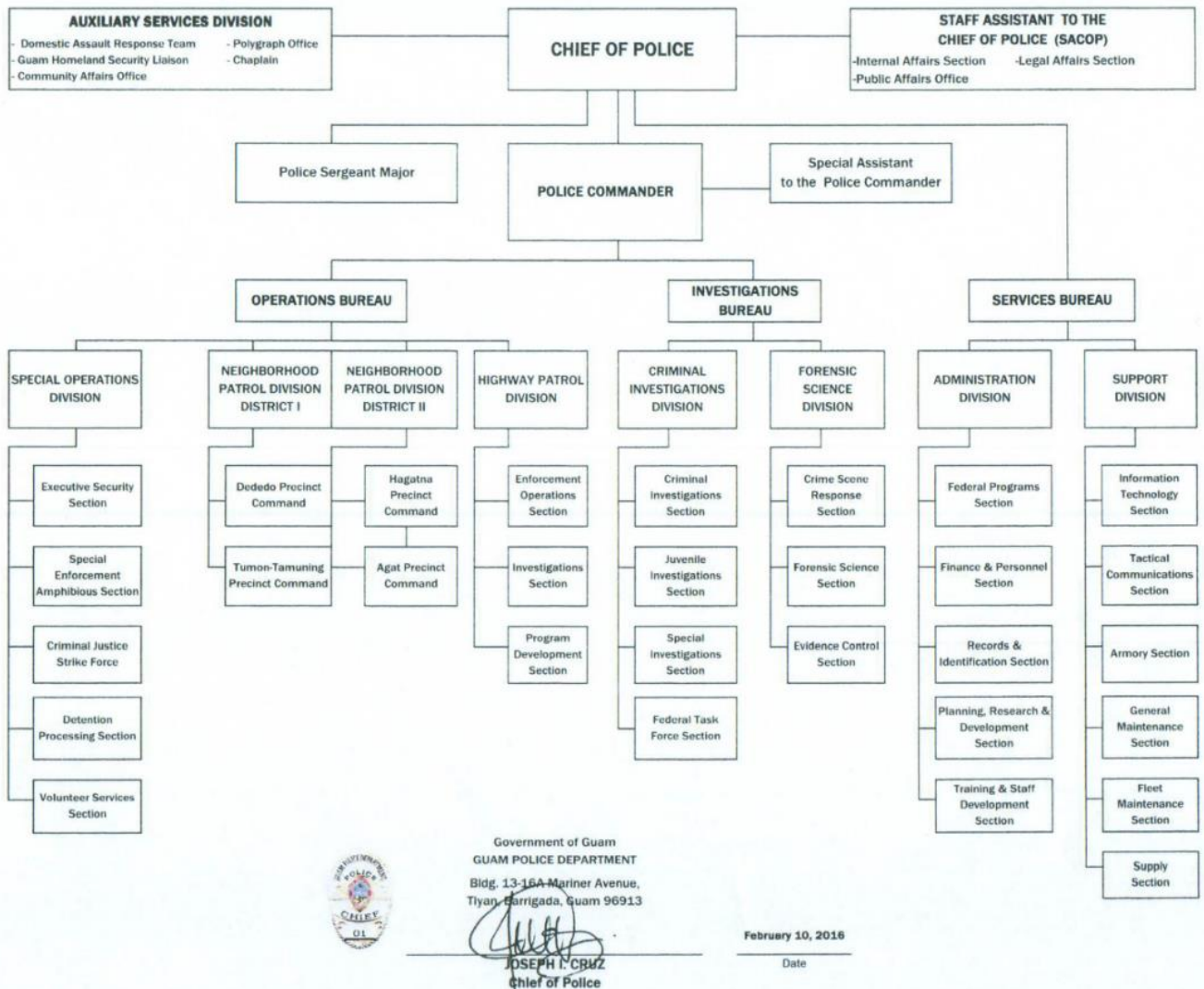


Figure C-12-1: Guam Police Department Organizational Chart

**4.1 Resources**

**Table C-12-1: Federal On-scene Security, Protection, and Law Enforcement Capabilities and Assets**

Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets	
Organization	Capability/Asset
<p style="text-align: center;"><b>U.S. Department of Justice – U.S. Marshals Service (USMS)</b></p>	<p>The USMS’s greatest ability is to rapidly deploy Federal Law Enforcement Officers (FLEOs) worldwide with minimal notification. The USMS may provide Deputy U.S. Marshals, support personnel, tactical medics, medics, explosive detection canine handler teams, judicial security specialists, critical incident (peer support) response teams, and technical operations support. The USMS—</p> <ul style="list-style-type: none"> <li>▪ Possesses the Special Operations Group, which conducts high-risk missions.</li> <li>▪ Maintains Incident Management Teams (IMTs) that are self-contained and able to rapidly respond to an incident.</li> <li>▪ Operates a Mobile Command Center that is available for deployment in support of assigned missions.</li> <li>▪ Through the Technical Operations Group, maintains a group of specialty vehicles and equipment to support assigned duties.</li> <li>▪ Is responsible for personal protection of federal jurists, court officers, witnesses, and other threatened persons where criminal intimidation impedes the functioning of the judicial process.</li> <li>▪ Sustains the custody of federal prisoners from the time of their arrest, or when they are remanded to a Marshal, until the prisoner is committed by order of the court, otherwise released by court order, or returned to the custody of the U.S. Parole Commission or the Bureau of Prisons.</li> </ul>
<p style="text-align: center;"><b>U.S. Department of Agriculture (USDA) – Forest Service, Law Enforcement and Investigations</b></p>	<p>The USDA through the Forest Service (Law Enforcement and Investigations) may provide trained public safety, law enforcement, investigations, and security resources for areas under USDA/Forest Service jurisdiction or to other locations and operations if appropriate authority is provided by the requesting jurisdiction or the USMS. Primary capabilities and assets include but are not limited to—</p> <ul style="list-style-type: none"> <li>▪ Investigations support, including specialized work such as wildland fire cause and origin, cultural resource looting, and natural resource damage.</li> <li>▪ Rural and backcountry operations and surveillance and reconnaissance equipment and techniques.</li> <li>▪ High clearance/remote area law enforcement vehicles, including 4x4s and all-terrain vehicles (ATVs).</li> <li>▪ K9 teams (patrol, tracking, and drug detection).</li> <li>▪ Horse-mounted and stock-packing operations.</li> <li>▪ Rural area protest management and protestor device extrication.</li> <li>▪ Tactical helicopter operations (rappel, fixed-line personnel transport, cargo sling operations, and air operations management).</li> <li>▪ Boat operations.</li> <li>▪ Incident operations/facility security.</li> </ul>



<b>Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets</b>	
<b>Organization</b>	<b>Capability/Asset</b>
<b>Department of Commerce – NOAA</b>	National Oceanic and Atmospheric Administration (NOAA) provides law enforcement and security capabilities.
<b>Department of Energy (DOE) – National Nuclear Security Administration (NNSA)</b>	<p>National Nuclear Security Administration (NNSA) provides—</p> <ul style="list-style-type: none"> <li>▪ Response to DOE/NNSA facilities emergency and nuclear or radiological emergencies and technical advice on radiological issues for the protection of the public and the environment.</li> <li>▪ Security support at DOE/ NNSA facilities; may require appropriate assistance when responding to a location other than a DOE/NNSA facility.</li> </ul>
<b>Department of the Interior (DOI) – Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Bureau of Reclamation, Fish and Wildlife Service, and National Park Service (NPS)</b>	<p>BIA, BLM, Bureau of Reclamation, Fish and Wildlife Service, and NPS may provide uniformed law enforcement officers and special agents under DOI jurisdiction or to other locations if appropriate authority is provided by the requesting jurisdiction and/or the USMS. Primary DOI law enforcement capabilities and assets include the following:</p> <ul style="list-style-type: none"> <li>▪ Special event teams/civil disturbance units to handle large-scale demonstrations, special events, crowd control, and tactical law enforcement operations.</li> <li>▪ Uniformed law enforcement officers for community policing, force protection, traffic control, and site security.</li> <li>▪ Special agents for investigative operations and support.</li> <li>▪ Ability to perform rural and remote area law enforcement operations, including open water and mountain conditions.</li> <li>▪ High-clearance/remote-area law enforcement vehicles, including 4x4s and ATVs.</li> <li>▪ Horse-mounted units (rural and urban), tracking teams, and K-9 units (patrol, tracking, and drug detection).</li> <li>▪ Limited aviation assets including fixed-wing and rotary-wing aircraft.</li> <li>▪ Limited small-craft marine assets.</li> <li>▪ Limited mobile communications and command posts.</li> </ul> <p>Note: Vehicles, boats, aviation assets, and mobile command posts may have limited availability due to their limited number and to their diverse and often remote locations across the country. There may be extended response times to an incident. Utilization of these assets may require logistical support for their transportation to an incident.</p>
<b>Department of Homeland Security</b>	<p><b>Office of Infrastructure Protection</b></p> <ul style="list-style-type: none"> <li>▪ Conducts vulnerability assessments, performs risk analyses.</li> <li>▪ Coordinates protective measures in conjunction with the private sector and federal, state, tribal, and local agencies.</li> <li>▪ Coordinates with private sector entities in protecting critical infrastructure and telecommunications systems.</li> </ul>

Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets	
Organization	Capability/Asset
	<p><b>Office of Intelligence and Analysis</b></p> <ul style="list-style-type: none"> <li>▪ Uses information and intelligence from multiple sources to identify and assess current and future threats to the United States.</li> <li>▪ Provides the full spectrum of information support necessary for the benefit of the federal, state, tribal, and local levels throughout the United States and U.S. territories and possessions to secure the homeland, defend the citizenry, and protect critical infrastructure.</li> <li>▪ Executes its mission within the functional areas of Collection and Requirements; Threat Analysis; Production Management; Border, Chemical, Biological, Radiological, Nuclear and Explosive Threat; Homeland Environment Threat Analysis; Information Management; and Intelligence Plans; and Integration.</li> </ul>
	<p><b>Science and Technology Directorate (S&amp;T):</b> Provides science and technology subject-matter expertise.</p>
	<p><b>Department of Homeland Security Transportation Security Administration (DHS/TSA):</b> Primary responsibility for security in all modes of transportation, transportation infrastructure, and the people and goods in transit, DHS/TSA provides transportation security screening, inspection, vulnerability assessments, and law enforcement services throughout the transportation enterprise. DHS/TSA support is normally in the aviation domain of the transportation sector, but similar support may be provided to other transportation modes as requested and approved by appropriate federal authority.</p>
	<p><b>Office of Law Enforcement/Federal Air Marshals Service</b></p> <ul style="list-style-type: none"> <li>▪ Provides law enforcement personnel and activities.</li> <li>▪ Coordinates deployment of explosives-detection canines along with state or local agency handlers.</li> <li>▪ Deploys explosives specialists for technical, forensic, and intelligence support activities, including post-blast investigation support where explosives expertise is required.</li> </ul> <p><b>Office of Security Operations (OSC):</b> Through federal security directors around the nation, OSC provides transportation security personnel and activities (e.g., screening and inspection).</p>



<b>Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets</b>	
<b>Organization</b>	<b>Capability/Asset</b>
	<p><b>U.S. Customs and Border Protection</b> may provide—</p> <ul style="list-style-type: none"> <li>▪ Uniformed law enforcement officers; canine teams for detection of humans, cadavers, drugs, and explosives; horse-mounted units; and tracking teams.</li> <li>▪ Rapid-Response Special Operations Units capable of short-notice nationwide deployment, to include the Border Patrol Tactical Unit; Border Patrol Search, Trauma, and Rescue Teams; law enforcement search and rescue (SAR) personnel; regional Special Response Teams; search and recovery divers; and law enforcement medical personnel.</li> <li>▪ Assets such as fixed-wing and rotary-wing aircraft, command and control aircraft, command and control vehicles, mobile communications repeaters, marine vessels, detainee transport vehicles, and special purpose vehicles (e.g., 4X4s, ATVs, sand rails, snowmobiles).</li> <li>▪ Imaging equipment, such as full truck/container-size x-ray and gamma-ray systems, radiation detection equipment, radioactive isotope identification equipment, jump-team response capabilities, expert reach-back for resolution of radiation detection incidents or suspected chemical or biological response situations, and 24/7 analysis and targeting capability on persons and cargo.</li> </ul>
	<p><b>U.S. Immigration and Customs Enforcement</b> may provide—</p> <ul style="list-style-type: none"> <li>▪ Law enforcement officers, to include special agents, police officers, inspectors, immigration enforcement agents, and technical enforcement officers.</li> <li>▪ Various response vehicles, to include command and control, marked patrol, secure buses, transportation vans, and special purpose vehicles.</li> <li>▪ Special teams, to include special response teams and HAZMAT teams.</li> </ul>
	<p><b>U.S. Secret Service</b> may provide specialized resources and capabilities, consistent with federal laws and regulations, when appropriate and according to resource availability.</p>
	<p><b>Federal Protective Service (FPS)</b> employs 1,225 federal staff (including 900 law enforcement security officers, criminal investigators, police officers, and support personnel). FPS provides comprehensive coverage for government facilities nationwide.</p>
	<p><b>Department of Homeland Security Crisis Response Team</b> is operated by FPS and meets the requirements for both intra-and inter-regional support of law enforcement operations in response to a critical national emergency or disaster incidents or special events, as required.</p>

Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets	
Organization	Capability/Asset
<b>U.S. Coast Guard (USCG)</b>	<p>USCG enforces, or assists in enforcing, federal laws and treaties on waters under U.S. jurisdiction and other international agreements on the international waters. USCG possesses the civil authority to board any vessel subject to U.S. jurisdiction.</p> <ul style="list-style-type: none"> <li>▪ <b>National Strike Force:</b> The three strike teams—Atlantic, Gulf, and Pacific—have incident-management skills and specialized equipment to respond to oil spills and other hazardous substance pollution incidents.</li> <li>▪ <b>Tactical Law Enforcement Teams:</b> The USCG's two deployable tactical law enforcement team units are known as Law Enforcement Detachments aboard U.S. Navy vessels to enforce U.S. and international laws.</li> <li>▪ <b>Port Security Units:</b> The USCG's eight port security units are expeditionary forces responsible for maintaining security in overseas ports during U.S. military operations.</li> <li>▪ <b>Maritime Safety and Security Teams:</b> The USCG's 12 Maritime Safety and Security Teams constitute a domestic force for mitigating or responding to terrorist threats or incidents.</li> </ul>
<b>Department of the Treasury</b>	<p>The U.S. Department of the Treasury may provide law enforcement officers, investigations, and security resources for areas under U.S. Treasury jurisdiction or to other locations if appropriate authority is provided by the requesting jurisdiction and, if necessary and appropriate, by the USMS. The U.S. Mint and Bureau of Engraving and Printing Police primary capabilities include but are not limited to: personnel with experience at all levels and many functions of ICS/NIMS operations, convoy escort and protection, crowd/traffic control, Critical Incident Response Teams, and High-Value Asset Protection Teams. The U.S. Mint Police Division has established teams to support ESF #13.</p>
<b>Department of Veterans Affairs (VA)</b>	<p>The VA provides staff to protect VA hospitals/homes during an emergency.</p>

Federal On-scene Security, and Protection, and Law Enforcement Capabilities and Assets	
Organization	Capability/Asset
<b>Environmental Protection Agency (EPA) – Office of Criminal Enforcement, Forensics, and Training</b>	<p>Through the Office of Criminal Enforcement, Forensics, and Training, which incorporates the Homeland Security Division (HSD), the National Counter-Terrorism Evidence Response Team/Counter-Terrorism Response Team, the Criminal Investigation Division (CID), and the National Enforcement Investigation Center (NEIC), EPA provides assistance as follows:</p> <ul style="list-style-type: none"> <li>▪ <b>HSD</b> – Law enforcement arm of EPA that provides counterterrorism support to EPA programs and other federal law enforcement using specialized training.</li> <li>▪ <b>National Counter-Terrorism Evidence Response Team/Counter-Terrorism Response Team</b> – Specialized evidence response teams for EPA trained in forensic evidence preservation and collection in a contaminated environment for a wide range of hazardous materials.</li> <li>▪ <b>CID</b> – Law enforcement arm of EPA that investigates allegations of criminal violations of all federal environmental statutes.</li> <li>▪ <b>NEIC</b> – Technical support center for EPA enforcement and compliance assurance programs nationwide that specializes in forensic analysis of industrial chemicals.</li> </ul>
<b>National Aeronautics and Space Administration (NASA)</b>	As available, NASA assets and capabilities—such as geospatial modeling and decision support systems, aircraft with sensors, unmanned aerial vehicles, and a SAR team—may be utilized. These assets are designed to support a NASA event or NASA properties, but may be provided if requested for ESF #13 missions.
<b>Social Security Administration (SSA)</b>	SSA may deploy protective and investigative units during an emergency.
<b>U.S. Postal Service (USPS)</b>	USPS provides support to worker protection, public health, medical prophylaxis, disease surveillance, criminal investigation, emergency response, waste disposal, mail security, sampling methods, and bioterrorism response operations.
<b>Inspector General (IG) Offices</b>	The President’s Council on Integrity and Efficiency (PCIE) and the Executive Council on Integrity and Efficiency (ECIE) represent the federal IG community, which includes IGs from approximately 60 federal agencies and entities. In the event of an incident requiring a coordinated federal response, the PCIE/ECIE may coordinate the response from the IG community. Such coordination may include identifying IG law enforcement officers available to provide public safety and security support, as well as compiling data concerning their skills, geographic location, and other relevant criteria in order to match requests for support with the most appropriate available IG resources.

## **5 Oversight, Coordinating Instructions, and Communications**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

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## Appendix D: Logistics

### 1 *Situation*

Guam is almost entirely dependent upon the flow of commodities through sea- and airports to sustain its population. A catastrophic typhoon on Guam will significantly affect the movement of resources and any necessary evacuations due to transportation infrastructure damage. Re-establishment of the flow of goods to Guam will be critical to the island's recovery.

The response to a catastrophic typhoon on Guam will require specific logistical activities that are outside of normal daily activities. Significant pre-impact preparations will also be required due to the geographic isolation of Guam to ensure a timely response.

This annex describes the concept of logistics for a joint Guam Homeland Security/Office of Civil Defense (GHS/OCD) and federal logistics response. Logistics support will be provided by federal, GHS/OCD, and private sources in accordance with the defined response phases. This annex describes the facilities and transportation routes that will be used to accomplish the logistics response mission and the requirements for establishing Incident Support Bases (ISBs), Federal Staging Areas (FSAs), GHS/OCD staging areas, and the points of distribution (PODs) necessary to support the deployment of response teams and the distribution of commodities to the affected populace.

#### 1.1 **Purpose**

In the joint response organization, the Logistics Section supports GHS/OCD and federal response and recovery operations, resource planning, management, and sustainment. This annex provides information on the planning and coordination actions required to ensure acquisition/delivery of resources and support for survivor needs until the private sector can engage and sustain the daily requirements of the population of Guam.

#### 1.2 **Scope**

Disaster operations resource support consists of emergency relief supplies, equipment, personnel, temporary facilities, and contracting services for emergency response and recovery efforts.

Response assets will be provided from current inventories, commercial capabilities, and/or via Mission Assignments (MAs) of multiple agencies both on and off the island of Guam. Federal support of the movement of goods and personnel in accordance with Unified Coordination Group (UCG) objectives will be through the Logistics Section.

#### 1.3 **Policies and References**

- Logistics actions will be conducted in accordance with the authorities provided under the National Response System, the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) (Pub. Law 93-288, as amended), the Homeland Security Act of 2002, Homeland Security Presidential Directive 5, Homeland Security Presidential Directive 8, and the Post-Katrina Emergency Management Reform Act of 2006.
- The General Services Administration (GSA) is the primary federal agency for resource procurement and supports federal agencies and state, territorial, tribal, and local

governments that require resource support prior to, during, and after incidents that need a coordinated federal response.

- Acquisition of resources will be supported by pre-existing memorandums of understanding/memorandums of agreement (MOUs/MOAs) and inter-agency agreements (IAAs) or through the execution of MAs.

## **2 Mission**

The mission of the joint GHS/OCD and federal logistics response organization is to effectively plan, manage, and sustain the overall response and recovery logistical effort in order to save and sustain human lives, minimize suffering, stabilize and restore critical infrastructure, and set the conditions to return the island of Guam to normal operations following a major typhoon.

### **2.1 Objectives**

This appendix provides a description of coordinated logistics activities and support to accomplish the following objectives:

- Deliver fuel to maintain continuity of essential operations and services.
- Restore essential operations at the Port of Guam.
- Distribute essential commodities and initial response resources (IRR).

Due to the insular nature of Guam, a Presidential Disaster Declaration must be requested by the Governor of Guam as soon as practicable in order to offset time and distance delays in the movement of people, equipment, and commodities from the U.S. mainland, Hawaii, neighboring islands, and/or Asia, as required, to reduce associated post-storm impacts.

## **3 Execution**

The overarching logistics strategy is to activate staging areas in CONUS and Hawaii and “push” resources to Guam during Phases 1b and 1c. Based on demand, Guam will “pull” resources from these staging areas during Phases 2a and 2b. During Phase 2c, the use of air assets as a means of resupply will decrease as the port regains operability.

### **3.1 Critical Considerations and Assumptions**

#### **3.1.1 Critical Facts and Assumptions (Logistics) – General**

- The western Pacific area averages 25-30 named storms per typhoon season.
- U.S. national defense spending is the main driver of Guam’s economy. Total federal spending (defense and non-defense) amounted to \$1.973 billion in 2014, or 40.4 percent of the Guam’s Gross Domestic Product (GDP).
- Guam serves as a forward U.S. base for the western Pacific and is home to thousands of American military personnel.
- Federal grants amounted to \$373.3 million in 2013, or 32.6 percent of Guam’s total revenues for the fiscal year.

- Apra Harbor, on the list of commercial strategic seaports in the US, is not a federally maintained port or waterway.
- Guam Power Authority (GPA) is an approved sub-grantee and eligible for FEMA's Public Assistance Program
- Sufficient collaboration and cooperation will occur between GHS/OCD and federal agencies, nongovernmental organizations (NGOs), and the private sector to coordinate the necessary resources to respond to a major typhoon in Guam.
- GHS/OCD, through the FEMA Watch Center initially and followed by coordination with the Regional Response Coordination Center (RRCC), will provide information about their level of capability.
- A Stafford Act Disaster Declaration will be issued at some point post-impact of a major typhoon strike on Guam. Prior to a declaration, response actions taken will fall under FEMA's surge response authority.
- After cargo loading, sea shipment times are approximately 13 days from the West Coast of the United States, approximately 7 days from Hawaii, and approximately 4-6 days from Asian ports.
- After cargo loading, air shipment times are approximately 13 hours from the West Coast of the United States (if direct without stopping to refuel), approximately 8 hours from Hawaii, and 3-8 hours from Asia.
- Transport of first responders, commodities, and other required resources into and around Guam will be significantly affected by damage to transportation infrastructure (ports, airports, and highways/roads), debris removal operations, inspections, and repair closures. Surface transportation may be further limited by potential shortages of fuel, damage to fuel distribution and delivery capabilities/infrastructure, and power outages.
- GHS/OCD will identify priority routes that will be the focus of debris clearance and traffic management immediately after the typhoon. These include major artery routes, major secondary routes, routes to/from hospitals, routes for fire and police response, routes to/from designated shelter areas, routes to/from designated staging areas and PODs, etc.
- Seaport and airport operations will be disrupted while assessments and repairs are made. The estimate for reopening Guam's port is approximately 3-4 days with an additional 7-10 days of daylight-only operations. Estimates for reopening Guam's airports are as follows: A.B. Won Pat International – approximately 12-24 hours (minimum); Andersen Air Force Base (AFB) – 24 hours.
- ISBs could be activated on the West Coast of the United States and staffed through the Logistics Management Directorate (LMD) at FEMA Headquarters (HQ), in coordination with the Region IX RRCC. Possible ISB locations include Travis AFB and Moffett Federal Airfield, where access to both an airfield and/or the ports of Oakland or Honolulu is readily available.
- Establishment of an FSA at A.B. Won Pat International Airport and Andersen AFB will be required for receiving, inventorying, storing, and distributing resources. Federal



resources will be turned over to GHS/OCD at the designated FSA. GHS/OCD may then stand up its own staging areas for the staging of resources prior to follow-on dispersal of goods to designated shelters, PODs, or shelter-in-place (SIP) populations. An additional FSA location is Joint Base Pearl Harbor-Hickam on Hawaii, which was selected to allow maximum flexibility in transportation and positioning.

- Distribution Centers (DCs) in Guam and Hawaii will provide initial response resources (IRR) as requested/required.
- Media attention will generate spontaneous offers of assistance from the public, which will complicate resource management and require coordination.
- Integration of donated resources into GHS/OCD supply systems may be necessary to meet identified shortfalls.
- Timelines to meet Emergency Support Function (ESF) requirements need to take into account the ability to coordinate the air and/or sea shipment, receipt, and distribution of goods.
- Sufficient GHS/OCD, commercial, Guam National Guard (GUNG), and U.S. Department of Defense (DOD) transportation assets exist on Guam to handle interisland resource transportation requirements.
- Additional trained personnel will be required to support response and recovery operations; demand cannot be met by Guam resources alone.
- Sufficient pre-event warning will be available to allow the on-island sheltering and/or movement of critical resources and support assets out of the inundation zone and if available, into hardened structures capable of withstanding Category 5 typhoon winds.
- Evacuation of select areas in or adjacent to suspected inundation zones on Guam may be conducted pre-event and will continue as soon as practicable post-event, as necessary.
- Inbound response personnel will be controlled (numbers and rate) to ensure an appropriate balance between response capability added and support requirements needed.
- The Logistics Section will be able to communicate via voice and data with the Region IX RRCC and/or FEMA National Response Coordination Center (NRCC), as applicable.

### **3.1.2 Critical Facts and Assumptions (Logistics) – Mass Care and Sheltering**

- Approximately 7,390 homes and multi-family structures could be rendered uninhabitable by the storm, displacing up to 27,343 persons.
- The majority of the displaced population (95 percent) will shelter with family members or shelter in place, leaving an estimated 1,367 persons seeking emergency shelter.
- There are 16 designated emergency shelters, with a total capacity of 2,360 persons.
- All 16 shelters have backup generators and water storage. Generator refueling/servicing and water replenishment must be accomplished prior to impact. Post-impact, the shelter population will return to their homes or to designated temporary shelter locations, which are near village mayor's offices.

- Each village has the capability to establish a POD and the PODs are established at the discretion of the village mayor. Village mayors establish PODs on an “as needed” basis and likewise close PODs when there is no longer a requirement for relief supplies.
- 8,000 survivors will seek emergency shelter and require feeding assistance.
- People entering shelters are expected to bring 7-10 days of supplies with them to shelters, and this requirement will be emphasized by ESF #15 representatives. However, past experience has shown persons seeking shelter may not bring their own supplies with them and instead become dependent upon relief supplies.
- Designated transportation assets and mass care resources may be pre-staged at appropriate designated shelters/mayors’ offices prior to storm impact.
- An estimated 150,000 people will shelter in place and will be able to feed themselves for 1 to 7 days.
- Primary on-island grocery stores (Payless, Cost-U-Less, K-Mart, etc.) have approximately a 2-week supply of food in stores. Another 2 weeks’ worth of supplies is typically in container ships en route to Guam at any given time.
- GHS/OCD does not have its own stockpile of Meals-Ready-to-Eat (MREs) or Humanitarian Daily Rations (HDRs). The only known significant quantities of MREs/HDRs on Guam are located at DC Guam and in U.S. Navy warehouses.
- Due to time and distance limitations for resource transportation to Guam, any significant support for mass feeding (other than MREs/HDRs currently located at DC Guam and U.S. Navy warehouses) may not begin until 3 to 4 days post-storm.
- Staffing requirements at designated shelters is accomplished through the Guam Department of Education (GDOE). Staffing requirements for PODs is the responsibility of the mayors’ Council of Guam (MCOG).
- Ample communications capability (land lines, cell phones, two-way radios, etc.) will exist at designated shelters and PODs.
- There is no plan to pre-evacuate visitors from Guam ahead of a typhoon. Post-storm evacuations will be limited to emergency/critical care needs. Hotel and tourism agencies will handle coordination directly with airlines and foreign countries to relocate or return visitors as needed, post-storm.
- The 13,285 visitors will be sheltered and cared for by their hotels for not less than 7 days. Typically, the average length of stay for visitors is 3 days, and the 13,285-visitor population represents the number on any given weekend in Guam.
- DOD will be the lead in sheltering and feeding military personnel, their dependents, and any DOD contractors.
- Any long-term outage of the Port of Guam will affect not only Guam but also trans-shipment operations supporting the Commonwealth of the Northern Mariana Islands (CNMI), the Federated States of Micronesia (FSM), and the Republic of the Marshall Islands (RMI). The Port of Guam is the central shipment hub for these island chains.

### ***3.1.3 Critical Facts and Assumptions (Logistics) – Critical Facilities***

- GHS/OCD has identified appropriate critical facilities.
- Nearly all critical facilities have emergency generators installed. These generators are tested monthly and it is standard procedure to test start and fuel generators prior to a typhoon making landfall. Generator fueling/servicing must be accounted for post-impact to ensure continued capability at these facilities in the event that primary power is disrupted by the typhoon.

### ***3.1.4 Critical Facts and Assumptions (Logistics) – Medical***

- The three hospitals on Guam normally operate at 90 percent of capacity or more. All three hospitals have emergency power generation capability installed.
- Pre-impact, there will be a surge of vulnerable populations at hospitals. Guam does not have sufficient medical personnel on-island to handle the expected surge of patients.
- Based on typhoon history, there will not be an expected surge in acute care patients or fatalities post-impact.
- Guam Memorial Hospital (GMH) has two backup generators (a 1.6-megawatt generator and a 650-kilowatt generator). The fuel requirement for these generators is met by a 10,000-gallon and a 5,000-gallon diesel fuel tank, respectively. The daily fuel burn rate for the generators is approximately 2,000 gallons per day, enabling the hospital to run for approximately 1 week without needing additional diesel fuel. GMH generators are tested and fueled prior to arrival of a typhoon.
- GMH has a backup water supply provided by a 400,000-gallon below-ground water tank and a 20,000-gallon above-ground water tank. GMH's normal water usage is approximately 90,000 gallons per day, enabling the hospital to operate for approximately 4.5 days without needing an additional delivery of water.
- Generator fueling/servicing and water replenishment must be accounted for to ensure continued medical capability in the event that primary electrical power and water are disrupted by the typhoon.

### ***3.1.5 Critical Facts and Assumptions (Logistics) – Power Restoration***

- GPA's estimate for 90-percent restoration of the power system after a direct hit by a catastrophic typhoon is approximately 60 days.
- Guam's electrical power system is a combination of above-ground and below-ground distribution and transmission lines. There are 582 miles of above-ground distribution lines and 154 miles of above-ground transmission lines. There are 63 miles of below-ground distribution lines and 20 miles of below-ground transmission lines.
- The vast majority of power poles are made of concrete and can withstand typhoon force winds; however, severe damage to above-ground distribution and transmission lines is likely to occur.

- The below-ground system will be much more survivable. The below-ground system is concentrated in Tumon Bay (a major tourist area) and the areas surrounding the GMH, A.B. Won Pat International Airport, and the Port of Guam.
- GPA has mutual aid agreements with several off-island power companies/agencies including: CNMI, Hawaii Electric Company, Virgin Islands, Palau, and Pohnpei.
- GPA has approximately 2 months of fuel storage to back up their operations.

### ***3.1.6 Critical Facts and Assumptions (Logistics) – Water Restoration***

- Water usage on Guam is approximately 42 million gallons per day. The main Guam Waterworks Authority (GWA) water source is a series of deep wells located in the northern/central portion of the island.
- Water wells are maintained by GPA and are taken off island power pre-impact.
- GWA purchases additional water production capability from DOD to meet daily requirements.
- The North/South Bypass allows surface water processed at the Ugum plant to service northern communities.
- The North/Central water system is capable of being isolated, which will preserve water pressure in the system and extend potable water service in the event of a loss to island power.
- There are 400 miles of water pipelines, 121 well sites, 250 booster stations, a river water treatment plant, and 48 tanks. Almost all have backup generator support. Daily fuel burn rates (if all generators are being utilized) can reach 50,000 plus gallons of diesel fuel per day. Fueling and servicing of these generators must be accounted for to ensure continued capability to provide water to the Guam populace if the primary water system is disrupted by the typhoon.
- If all generators are operational, the GWA can provide the same water capability as it would on normal electrical power. As generators fail, water pressure will decrease. The estimated generator failure rate can reach as high as 30 percent.
- There are 30 in-use potable water tanks that contain about 32.6 million gallons of water when full (the tanks are normally kept at about 25 percent of capacity).
- GWA has four available water trucks (6,000-gallon capacity each).
- GWA possesses assorted water buffaloes and bladders (adding up to approximately 35,000 gallons of water storage capability).
- There are two primary water bottling facilities on Guam: Pepsi and Foremost. Their production is supported by two well sites. All other bottled water is brought in from off-island.
- Pepsi and Foremost are Guam's biggest producers of ice.

### ***3.1.7 Critical Facts and Assumptions (Logistics) – Fuel***

- No fuel is refined on Guam; all fuel is imported.
- The joint response organization will form a Fuel Task Force (FTF) that is responsible for identifying and meeting the fuel requirements of each critical facility in order to maintain essential services during a response.
- Fuel holding capacity on Guam is in excess of 30 days of supply for all types of fuel.
- With an extended power failure necessitating island-wide generator usage, Guam’s fuel stores may be stressed. This will be evident if Guam’s port, fuel pipeline system, or fuel storage area sustain major damage.
- A fuel delivery/prioritization plan must be developed to ensure critical facilities (hospitals, shelters, airport, etc.) and activities (emergency response, debris clearance, etc.) can be maintained. GHD/OCD is currently working on a critical facility priority list that will become the basis for the Guam fuel delivery/prioritization plan.
- Retail fuel assets to sustain the number of generators requiring fuel delivery currently do not exist.

### ***3.1.8 Critical Facts and Assumptions (Logistics) – Seaport and Airport***

- The Port Authority of Guam (PAG) is the controlling agency for the Port of Guam at Apra Harbor.
- PAG can handle all types of cargo (containerized, break-bulk, unitized, and fishery).
- The major shipping companies that service Guam internationally are Matson (U.S. West Coast/Hawaii), American Presidents Line (Asia and U.S. West Coast), Horizon (U.S. West Coast/Hawaii), and Kyowa (Asia). The major tug/barge shipping companies that service Guam and neighbor islands are Seabridge Micronesia, Cabras Marine, and Saipan Express.
- 90 percent or more of Guam’s total imports come through the port; 60 percent of Guam’s total imports come from the U.S. mainland and the remainder comes from Pacific markets, including Asia, Australia, New Zealand, and Micronesia.
- There are four primary ship berths utilized by PAG at Wharf F: F3, F4, F5, and F6. In addition, there is an overflow berth at Wharf H.
- Berths are limited to ships with a draft of 35 feet or less.
- The Port of Guam has three electric gantry cranes available for the offloading of container ships. These cranes are anchorable and can withstand a wind force of up to 250 mph.
- The Port of Guam is supported by eight backup generator units (two 500-kW generators and two 275-kW generators) in the event of a power outage. Utilizing these generators, the port can operate gantry cranes and maintain refrigerated cargo, the Harbor Master facility, and the Administration/IT facility. Each generator is supported by a 500-gallon diesel fuel tank. The 500-kW generators burn approximately 800 gallons of fuel per day, and the 275-kW generators burn approximately 400 gallons of fuel per day. This fuel

burn rate will necessitate a daily refueling schedule in the event that the generators need to be operated 24 hours a day.

- The primary container storage area covers approximately 26 acres. According to PAG, FEMA containers would be maintained in the reserve area prior to movement to an FSA. The reserve area has space for approximately 1,000 containers.
- Following a catastrophic typhoon, it is estimated that the Port of Guam will be inoperable for 3 to 4 days. After that, it is estimated that the port will be limited to “daylight-hour operation only” for another 7 to 10 days during final cleanup of channel/berth areas and while harbor marker repairs are made. In addition, the port is serviced by one road (Route 11), which provides access from the port to Guam’s main north/south road (Route 1). There is one bridge on Route 11 that, if washed out, can isolate the port from the remainder of the island until repairs can be made.
- Andersen AFB and A.B. Won Pat International Airport are the two primary airfields on Guam.
- A.B. Won Pat International Airport can support aircraft of all sizes. The airport is capable of protecting all necessary critical assets and has backup generator power for all critical facilities. Since all electrical lines leading to/from the airport are underground, limited damage is expected from high winds. The airport also has no major flooding issues. The airport has approximately 7 to 10 days of aviation fuel storage. The working maximum-on-ground number of aircraft at the airport is approximately 20. Following a typhoon, it is estimated that debris can be cleared off runways/taxiways, and the airfield can be reopened in approximately 12 to 24 hours (given appropriate backup generator power and operational navigational aids (NAVAIDs), Air Traffic Control facilities, etc.).
- A.B. Won Pat has built in redundant capability for airfield operations, as the airport is responsible for tracking all air movement over the Pacific.
- Andersen AFB can support aircraft of all sizes. The air base is capable of protecting all necessary critical assets and has backup generator power for all critical facilities, including runway lighting, tower facilities, NAVAIDs, etc. Andersen AFB utilizes civilian/Federal Aviation Administration (FAA) facilities for approach control. The air base can continue operations on generator power for several days without additional fuel shipments. Takeoff/landing operations will show little effect, but passenger and cargo handling capability may be affected. Without additional fuel, Andersen AFB can continue to support aircraft operations for 30-plus days with the approximately 66 million gallons of JP-8 fuel that is stored on base (although electrical power is required to access the stored fuel, either by base power or generator). Ample aircraft parking, materials handling equipment, and fuel truck assets exist at the airfield and can be utilized if Andersen AFB is not supporting other ongoing contingency operations. After a typhoon, it is estimated debris can be cleared off runways/taxiways and the airfield can be reopened in 24 hours.
- The nearest useable airport outside of Guam with any capability is located on Saipan.

### 3.1.9 *Critical Facts and Assumptions (Logistics) – Debris Clearance*

- Debris clearance priorities have been pre-established, and GHS/OCD is in the process of updating their Debris Management Plan.
- Debris clearance priorities focus on the primary routes (Route 1 and 16 to GMH, Route 7 to the U.S. Naval Hospital (USNH), etc.). Primary debris clearance efforts focus on routes that provide access for lifesaving/life-sustaining activities. The primary routes on Guam are—
  - Primary perimeter corridors: Routes 1, 2, 3, 4, 15
  - Primary traverse corridors: Routes 4, 8, 10, 16, 17
  - Andersen AFB access: Routes 1, 3, 9, 15
  - A.B. Won Pat International Airport access: Routes 8, 10, 16
  - Apra Harbor access: Routes 1, 11
  - Naval Base-Guam access: Route 1
- GHS/OCD has a shortfall in the number of personnel and equipment that may be utilized for debris clearance. Current plans call for utilizing the few debris clearance assets owned by GHS/OCD and contracting with private contractors for additional debris clearance assets. Available on-island GUNG and DOD assets will then be used to meet shortfalls.
- The Guam Hotel and Restaurant Association (GHRA) has contracts in place for debris clearance assets in the Tumon Bay (tourist) area.
- Activation of the Emergency Management Assistance Compact (EMAC) will allow GHS/OCD to utilize debris clearance assets from neighboring islands.
- GHS/OCD debris clearance asset contracts must ensure that GHS/OCD and other local agencies are not competing for the same on-island assets.

## 3.2 **Tasks by Phase**

### 3.2.1 *Phase 1a (Normal Operations)*

**Operational Focus:** “Steady state” operations in the absence of a storm.

**End State:** The end state for Phase 1a occurs when the National Weather Service (NWS) detects a threat that meets the criteria for a transition to Phase 1b and residents and government agencies are adequately prepared.

#### **Primary Actions**

- FEMA, based on this FEMA RIX 2018 *Guam Catastrophic Typhoon Plan* and in collaboration with GHS/OCD agencies, identifies logistics requirements and resources, balances logistics resources against logistics requirements, and establishes and communicates logistics plans, policies, and procedures.
- ESF #7 will employ strategic sourcing for any supplies and services sourced nationally.

- ESF #7 will determine whether the services or commodities identified as required by this appendix will be provided by FEMA or outsourced. The source of supply could be other federal agencies, NGOs, and/or the private sector.

### 3.2.2 *Phase 1b (Increased Likelihood)*

**Operational Focus:** Gaining situational awareness, identifying available resources and capabilities, and alerting deployable resources.

- Actions are taken to heighten situational awareness, anticipate requirements, and prepare for deployment of specific resources.
- The Incident Management Assistance Team (IMAT) deploys to Guam and forms a joint management team with GHS/OCD capable of supporting the incident and transitioning to a UCG.

**End State:** The end state for Phase 1b occurs when an assigned IMAT is operational on Guam, has formed partnerships with GHS/OCD, and is conducting joint planning in preparation for potential response operations.

### Primary Actions

- FEMA will maintain an inventory and accountability of resources at DC Guam and DC Hawaii for utilization as IRR.
- GHS/OCD will advise Region IX of shortfalls in GHS/OCD capabilities.
- Region IX activates the RRCC and deploys an IMAT to Guam to help establish logistics field activities, in coordination with GHS/OCD, at Emergency Operations Centers (EOCs), the Joint Field Office (JFO), and/or FSAs.
- RRCC coordinates through ESF #1 and ESF #7 (GSA) to lease A.B. Won Pat International Airport as the primary FSA.
- RRCC issues an MA to the DOD for use of Travis AFB and JBPH-Hickam as FSAs and Andersen AFB as an alternate FSA.
- RRCC builds push requirements for Phase 1c.
- ESF #7 monitors the situation and prepares partners for the response.
- Logistics Management and Resource Support will stage resources only with the concurrence of the National Logistics Coordinator.
- Resource Management Group will determine best sourcing of resources and transportation to meet requirements.
- FEMA LMD alerts prepares and deploys staging area management teams to A.B. Won Pat International Airport and JBPH-Hickam, and, if required, to Andersen AFB and Travis AFB.

### 3.2.3 *Phase 1c (Near Certainty)*

**Operational Focus:** Gaining and maintaining situational awareness, deploying resources to Guam, and increasing operational readiness.



During Phase 1c, the Governor of the Territory of Guam declares a State of Emergency and requests a Presidential declaration that, when approved, will designate a Federal Coordinating Officer (FCO) and enable a coordinated federal response under the authority of the Stafford Act.

Actions during this phase focus on deploying incident management assistance, assessment, and lifesaving response teams to Guam; protecting critical resources; and increasing operational readiness. Assessment and response teams deploy to hardened staging areas designated by the Territory of Guam. FEMA will employ a “push/pull” concept for resource response. Initially, critical response assets will be “pushed” to ISBs and FSAs in order to establish initial capability. Once operational control in the field is established, the “push” concept will transition to a “pull” concept. During the “pull” execution, in order to maintain effective resource oversight and handling, the RRCC, UCG, and/or JFO will communicate resource requirements through Resource Request Forms (RRFs) and WebEOC based on actual “burn rates.”

**End State:** The end state for Phase 1c occurs when the UCG is staffed and adequate resources are staged to accomplish key objectives. When preparatory actions are accomplished, the operational readiness of the response organization is increased by staging resources, positioning generators with fuel capabilities, and forming a UCG and other response and coordination organizations. Public safety is enhanced through a coordinated and aggressive public information campaign in advance of the storm.

### Primary Actions

- Perform tasks outlined in the Execution Checklist to include the formation of the Power Restoration Task Force (PRTF), Water and Wastewater Task Force (WWTF), Mass Care Task Force (MCTF), Medical Task Force, Fuel Task Force (FTF), and Port Task Force (Port TF).
- Activate territory ESFs, as required.
- GDOE opens emergency shelters.
- Transition water pumps at well locations from the power grid to emergency generators to support water supply post-impact.
- Provide support to fuel distribution operations for first responders, debris clearance teams, and emergency generators.
- All Territory of Guam task forces review priorities and coordinate with partner agencies.
- Protect and safeguard critical resources prior to typhoon impact in order to ensure operability and accessibility post-impact.
- FEMA coordinates for the movement of U.S. Army Corps of Engineers (USACE) temporary power resources from CONUS to Guam and fills all requests to push resources to the Guam FSA.
- GHS/OCD and private industry will ensure critical equipment and transportation assets, cargo, and warehoused goods are safeguarded from typhoon-damaging winds, flooding, and storm surge.
- GHS/OCD and private industry will deploy response teams to pre-designated, hardened areas in order to provide timely restoration of critical infrastructure.

- Private industry or private organizations (e.g., churches, community groups) may activate shelters for their members or employees and their families.

### **3.2.4 Phase 2 (Incident and Incident Response)**

**Operational Focus:** Supplying the necessary resources to staging area(s) and PODs in support of shelters and other critical facilities.

- Actions during this phase focus on employing resources to save lives; protect property and the environment; and preserve the social, economic, and political systems within the impacted area.
- Emergency shelters, located primarily at GDOE facilities, maintain water storage and generator capabilities and are a focal point of support for command and control, medical support, and access and functional needs/medical needs assistance.
- Debris clearance and fuel delivery operations support this strategy.

**End State:** The end state for Phase 2 occurs when response activities have set the conditions for recovery; emergency shelters have closed, and temporary sheltering has transitioned to transitional shelters or temporary housing, enabling the reopening of schools; the seaport has recovered and is able to service vessels by discharging cargo and executing onward movement of resources; and power generation and fuel distribution to essential infrastructure enables communications, water distribution, and basic sanitation.

### **Primary Actions**

- To support the distribution of resources to the affected population, GHS/OCD establishes a network of PODs based on requests from the Mayors' Council of Guam (MCOG). PODs will be used to distribute items such as food, water, personal care items, and basic medical supplies. PODs are currently planned for mayor's office locations in each village. The actual locations for and resources positioned at PODs on Guam will be determined by the UCG, based on specific conditions after the typhoon (area damage, debris clearance capabilities, road structure viability, security, etc.).
- Perform lifesaving and life-sustaining measures.
- Conduct mass care and sheltering.
- Minimize risks to visitors.
- Maintain functionality of water distribution systems.
- Deliver fuel to maintain essential services.
- Conduct debris clearance/debris removal operations.
- Re-establish transportation systems.
- Maintain continuity of port operations.
- Provide emergency power.
- Maintain situational awareness.

- Conduct joint (federal, territory, private sector, and NGO) damage assessments, including assessments of the functionality of key infrastructure systems (seaport, airport, water, and power).
- Create an environment conducive to recovery and mitigation.
- Deploy and receive off-island response teams and resources.
- Maintain the FEMA Region IX RRCC at Level 1.
- Develop demobilization and transition plans.
- FEMA will coordinate for acquisition and movement of response resources, including response personnel, from the U.S. mainland, Hawaii, and/or neighboring islands, if required.
- FEMA, GHS/OCD, and private industry will coordinate intra- and interisland movement of resources to affected populations.
- As required, ESF #7 will coordinate with ESF #11 (Agriculture and Natural Resources) to source and deliver food commodities based on an established U.S. Department of Agriculture (USDA) menu.

### 3.2.5 *Phase 3 (Recovery)*

**Operational Focus:** Restoring services, continuing government operations, and promoting economic recovery following the typhoon.

**End State:** The end state for Phase 3 occurs when recovery activities have set the conditions for long-term community recovery, temporary housing has transitioned to rebuilt homes or other permanent housing, schools are reopened, tourism is re-established, and critical facilities and infrastructure are self-sustaining through normal transactions.

The National Disaster Recovery Framework (NDRF) will not have yet been implemented in Guam. Efficient, post-disaster recovery relies on understanding the complex, slow-moving nature of the recovery process, which may continue as long as 5 to 10 years post-impact. As such, the NDRF's focus is to enhance recovery understanding and establish relationships prior to the development of strategies.

#### **Primary Actions**

- Once sustainable supply chain activities have been restored and GHS/OCD and private industry have begun to return to normal operations, FEMA will recover issued non-consumable items and coordinate for materiel return, reallocation, and disposition as well as materiel replenishment and refurbishment (based on cost-effectiveness and resource criticality).
- FEMA will execute the demobilization plan for a transition to recovery operations.
- FEMA will coordinate with GHS/OCD to provide long-term support for impacted communities.
- FEMA will coordinate with GHS/OCD to identify gaps in available resources and support the implementation of comprehensive long-term community planning efforts.

- FEMA LMD will act as the clearinghouse for resource returns and reallocates as appropriate based on short/long term requirements and in accordance with regulations and laws.

## **4 Administration, Resources, and Funding**

## **5 Oversight, Coordinating Instructions, and Communications**

### **5.1 Roles and Responsibilities**

#### **5.1.1 FEMA Headquarters Logistics Management Directorate**

FEMA HQ LMD is the primary office for directing and overseeing disaster support for all logistics functions during all incident phases. FEMA HQ LMD responsibilities for the incident include:

- Establishing, maintaining, and executing agency-wide logistics plans, policies, procedures, doctrines, standards, and governance;
- Developing and maintaining national logistics support requirements, capabilities, and visibility of resources;
- Providing agency-wide funding, budget, and resource management for logistics operations;
- Providing FEMA HQ and Region IX logistics with functional command, coordination, and oversight of all logistics activities (including national resource management at JFOs and DCs); and
- Providing agency-wide logistics information management and communications capabilities.

#### **5.1.2 FEMA Region IX**

FEMA Region IX RRCC will direct, oversee, and execute regional support for all logistics functions during all incident phases. FEMA Region IX responsibilities for the incident include:

- Establishing, maintaining, and executing supplemental regional plans, policies, and procedures that implement FEMA HQ plans, policies, and procedures;
- Staffing the JFO(s), FSAs, and ISBs and coordinating the agency logistics response among field units;
- Developing and coordinating regional requirements and capabilities with GHS/OCD responders and linking with GHS/OCD to coordinate interface;
- Providing regional funding and resource management;
- Providing accountability for FEMA resources assigned to Region IX; and

- Executing IAAs with other federal agencies and NGOs and procuring support from local sources.

### **Resource Synchronization and Integration**

Operational control and execution of logistics functions is delegated to the effective level of execution.

#### **5.1.3 FEMA Incident Management Assistance Team**

IMATs are responsible for FEMA field execution during all incident phases. IMAT responsibilities for the incident include:

- Executing plans, policies, and procedures;
- Executing funding, budget, and resource management;
- Executing IAAs and MOUs with other federal agencies and NGOs at the incident level;
- Executing contracts with the private sector; and
- Coordinating the agency response at the field incident level.

#### **5.1.4 Other Federal Agencies**

ESF #7 primary other federal agency partners for the incident include the following.

- **General Services Administration (GSA).** GSA is the Co-Lead agency for ESF #7 (Logistics Management and Resource Support). GSA will support any requirements for obtaining facilities, facility setup, space management, building services, general facility operations, and contracting for transportation services.
- **Department of Defense (DOD).** The DOD has a broad range of capabilities that can be utilized to support logistical response requirements. Although availability of DOD resources can be subject to higher-priority tasking, large numbers of assets (e.g., facilities, vehicles, aircraft, ships, other support resources) can typically be requested through the Defense Coordinating Officer (DCO).
- **Department of Transportation (DOT).** The DOT is the coordinating agency for ESF #1 (Transportation). DOT will work with Guam transportation departments and industry partners to assess any damage to transportation infrastructure and analyze the impact on transportation capability. DOT will implement response and recovery functions, including prioritizing or allocating civil transportation capacity, funding repair of federal aid highways, coordinating hazardous material (HAZMAT) operations, and completing any safety or security actions relating to movement restrictions, closures, quarantines, and evacuations.
- **Federal Aviation Administration (FAA).** The FAA, which is part of the DOT, will oversee the operation and regulation of the U.S. National Airspace System, which in this case is specifically the airspace in and around the island of Guam. After the incident, the FAA may delegate use of specified airspace around Guam for national defense, homeland security, law enforcement, search and rescue missions, or airdrop drop zone activity. The FAA may also implement air traffic and airspace control/management measures, such as temporary flight restrictions, aircraft ingress/egress corridors, etc., in conjunction with

these missions. After the typhoon, the FAA will assess airport conditions (e.g., damage to runways, airport communications, navigation equipment, air traffic control capability) and may restrict movement of aircraft based on this assessment.

- **U.S. Coast Guard (USCG).** The USCG will maintain jurisdiction over the Port of Guam. In the event of a typhoon, the USCG will—
  - Maintain, monitor, and report on the safety, viability, and navigability of the Port of Guam and associated waterways; and
  - Make and enforce decisions regarding the use of the Port of Guam or associated waterways, including opening or closing the port and waterways to vessel traffic.

### 5.1.5 *GHS/OCD Agencies*

Under the National Response Framework (NRF), GHS/OCD will be responsible for the initial response to the incident. The primary role of GHS/OCD will be to supplement local efforts before, during, and after the incident. Other important GHS/OCD responsibilities include:

- Standing up, staffing, and operating Guam staging areas;
- Operating PODs for the distribution of resources to incident survivors;
- Providing staff, as appropriate, to the JFO to partner with federal counterparts to ensure a unified response and recovery effort;
- Entering into and executing EMAC to provide mutual assistance for required resources;
- Providing effective coordination and timely requests for federal disaster assistance and aid (note: efficient federal support provided to GHS/OCD for disaster response is best delivered when GHS/OCD has pre-coordinated with its federal counterparts); and
- Collaborating with the Federal Government in disaster planning to ensure resources are delivered in a timely fashion to disaster survivors.

## 5.2 **Transportation and Logistics Coordination**

Throughout all phases of response and recovery, transportation and logistics support is the joint responsibility of both GHS/OCD and FEMA. Annex C (Operations) provides an overview of how the joint GHS-OCD/federal operation will execute the re-establishment of Guam's transportation systems to facilitate the effective movement of resources into and throughout Guam from CONUS ISBs and FSAs. Appendix C-6 (Restore Essential Operations at the Port of Guam) and Appendix C-7 (Distribute Essential Commodities and Initial Response Resources) provide a detailed description of how logistics plays a vital role in the response effort.

### 5.2.1 *GHS/OCD*

GHS/OCD and federal response coordination will be accomplished through the creation of a joint response organization, as described in Appendix A. The integration of territorial and federal responders working through task forces ensures unity of effort and efficient use of transportation assets to deliver required resources. As necessary, FEMA will issue MAs to other federal departments and agencies to provide additional resources and support. Situational awareness of the typhoon's impact to Guam's transportation infrastructure will be paramount to the

development and implementation of a logistics capability for delivering emergency disaster relief supplies and employing emergency response teams.

### ***5.2.2 Issuance of Disaster Policy, Doctrine, and Procedures***

FEMA (HQ and Region IX) and GHS/OCD must collaborate in the development of disaster response doctrine, policies, and procedures in consultation with all appropriate agencies.

## **5.3 Communications**

Effective communications are essential to the success of the response mission. Communications must be interoperable to ensure information flows both horizontally and vertically among federal, GHS/OCD, and private sector response agencies. See Appendix E (Operational Communications) for existing on-island capabilities and anticipated levels of federal response support. See Appendix X (Execution Checklist) for deployment of type/kind of communication assets/capabilities by phase and priority.

## Appendix E: Operational Communications

### 1 *Situation*

The Territory of Guam has one 800-MHz trunked public safety communications system, called the Guam Homeland Security/Office of Civil Defense (GHS/OCD) Public Safety Communications System (GGPSCS). The GGPSCS is managed by the Interoperability Coordinator, who is located at the Guam Police Department (GPD). Any Territory of Guam department and agency or federal partner that has a need for interoperable radio frequency communications may utilize the system at no cost (except for the cost of the subscriber units).

Agencies involved in a Guam disaster response use a variety of radio systems, including the primary 800-Megahertz (MHz) island-wide trunked system, very high frequency (VHF) conventional, ultra-high frequency (UHF) conventional and trunked, and high frequency (HF) land-mobile radio (LMR) networks. The disparate systems employed across Guam make interoperability among local agencies and jurisdictions challenging and present obstacles to coordination between incoming responders and Guam-based counterparts.

Spare radio handsets available at the GHS/OCD (200 units) may be insufficient to equip all incoming responders and enable them to operate on the local 800-MHz island-wide trunked system.

#### 1.1 **Background**

##### 1.1.1 *Interoperability*

There are no shared channels (i.e., ICALL, VCALL, UCALL, or associated TAC channels) available on the GHS/OCD network. Interoperability is achieved within the system on shared interoperable talk groups. GHS/OCD agencies can use the interoperable talk groups already programmed into their radios. Agencies not operating on the system can only access the interoperable talk groups by requesting gateway/console patch connections.

All users that are eligible under the Public Safety Radio Services and Special Emergency Radio Service, as defined in the Federal Communication Commission (FCC) rules and regulations, and licensed to use the spectrum are eligible to operate on the 10 common talk groups. GHS/OCD holds the license for all of GGPSCS-assigned frequencies so that Guam departments/agencies do not have to apply for licenses.

Other eligible entities, such as federal agencies, volunteer emergency corporations, the American Red Cross, The Salvation Army, and other National Response Framework (NRF) stakeholders, may also participate on a secondary basis in support of the preservation of life and property during an emergency. These eligible entities may be called upon by the Primary Agency when specifically enrolled in a documented emergency plan of a recognized emergency management agency. The only recognized emergency agency on Guam is GHS/OCD.

The GGPSCS primarily relies on console patching and currently has the capability of interoperating with all GHS/OCD first responders as well as the U.S. Coast Guard (USCG), U.S. Navy, U.S. Air Force, Guam National Guard (GUNG), 94th Civil Support Team, the U.S. Navy's Helicopter Combat Support Squadron 25 (HSC-25), and the local office of the Federal Bureau of Investigation (FBI).



GHS/OCD can communicate with the Commonwealth of the Northern Mariana Islands (CNMI) through HF radio or C-band satellite service if the CNMI's phone system is operational. It should be noted that nearby Saipan does not have communications capabilities with Guam nor do communications systems exist between CNMI's three main islands of Rota, Saipan, and Tinian. Communications among and from these islands are accomplished through satellite (Iridium or C-Band) or HF radio communications modes.

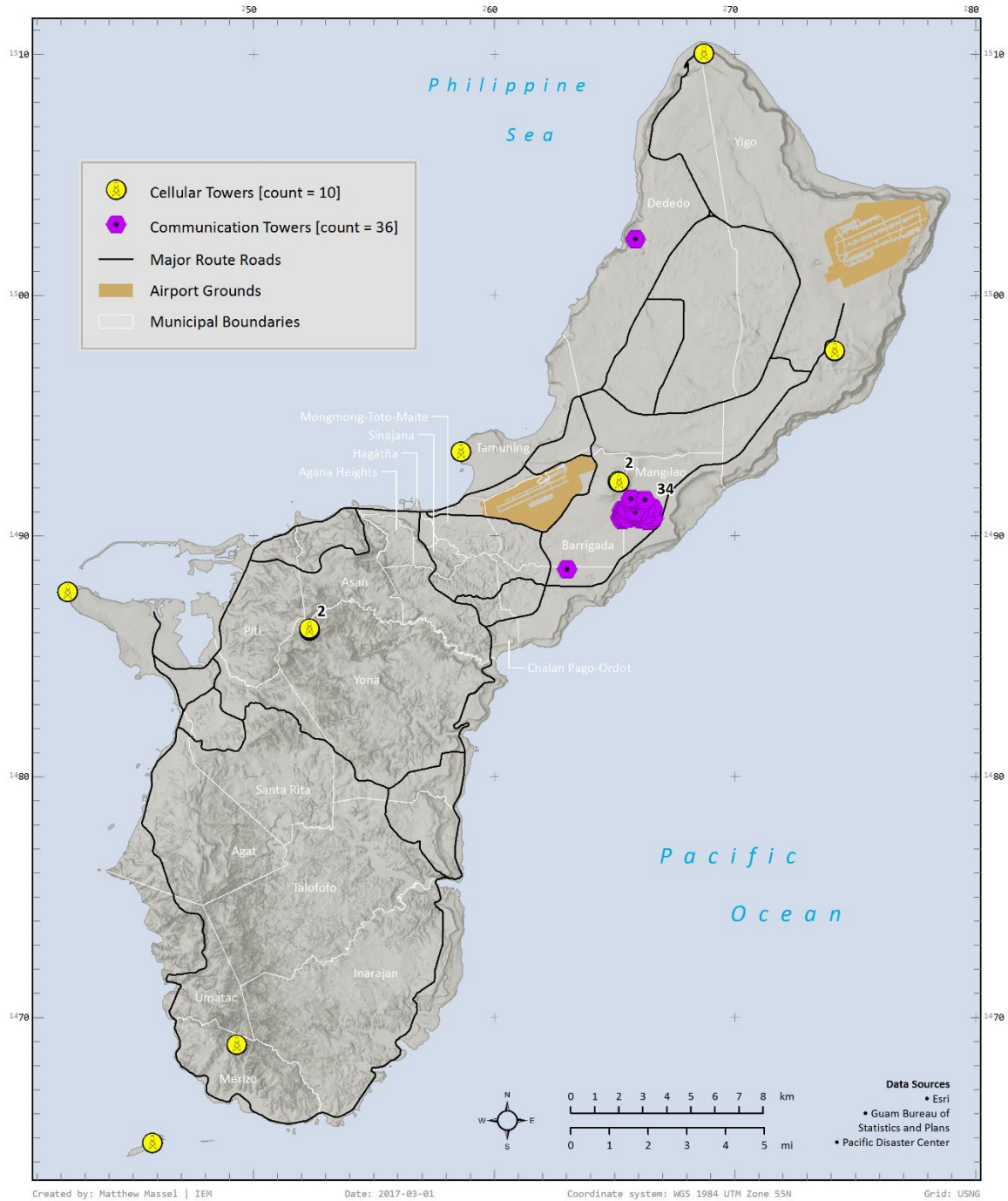
### ***1.1.2 Microwave***

Data is not transmitted through microwave except when the LMR system requires it to operate. The network is supported by microwave radio communications sites, which are located at Mt. Barrigada (system controller site), Orote Point, Pigua (Malesso), Malojloj, GHS/OCD, Police and Fire/EMS Dispatch Center, and Mt. Alutom (microwave system hub). All of the towers are well maintained and have proven to be capable of surviving 200 mile-per-hour (mph) winds.

Three of the towers belong to the commercial entity, GTA Teleguam (GTA), while the Barrigada tower is owned by GHS/OCD. GHS/OCD owns all of the land on which the towers and associated buildings are situated. There is an unwritten agreement for GHS/OCD to use the GTA towers. Access to all of these sites requires four-wheel-drive vehicles (and in some cases, a chainsaw) as well as entry access, which is managed by GHS/OCD through the GPD. All sites have diesel generators for backup power in the event of a commercial power failure. Figure E-1 shows the locations of the communications towers.

**Territory of Guam Typhoon Annex**  
Communications - Towers

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**Figure E-1: Guam Communications Tower Sites**

The microwave network and system segments currently lack redundant routes. In a catastrophic typhoon, the loss of microwave links on these systems or segments may disrupt critical data and LMR networks. Resources in Guam to support microwave link restoration, such as repair

technicians and spare parts, are limited to the local Motorola service facility. FEMA must be prepared to provide temporary backhaul to ensure effective communications in support of disaster response operations. In communications, backhaul is used to mean getting data to a point from which it can be distributed over a network. FEMA’s Mobile Emergency Response Support (MERS) has the capability of providing temporary microwave backhaul to support disaster operations.

**1.1.3 Radio Communications – Trunked Systems**

Most of Guam’s day-to-day and emergency communications needs are supported by an island-wide Motorola-based analog, wideband, non-secure 800-MHz trunked system/network, which covers 95 percent of the island and is capable of supporting many trunked talk groups. Linking of this “backbone” communications network is accomplished by the microwave systems, which links the communications network back to the dispatch center of GHS/OCD offices (such as the police and fire departments and the Emergency Operations Center [EOC]). Table E-1 lists Guam's 800-MHz Trunked Radio Inventory.

**Table E-1: Guam's 800-MHz Trunked Radio Inventory**

800-MHz Trunked Radio Inventory	
Police Cars	25
Fire Chief	1
Assistant Fire Chief	2
Battalion Chief	1
On-duty Fire Captain	1
Fire Stations	1 per station
Ambulances	1 per vehicle
GHS/OCD Cache	200

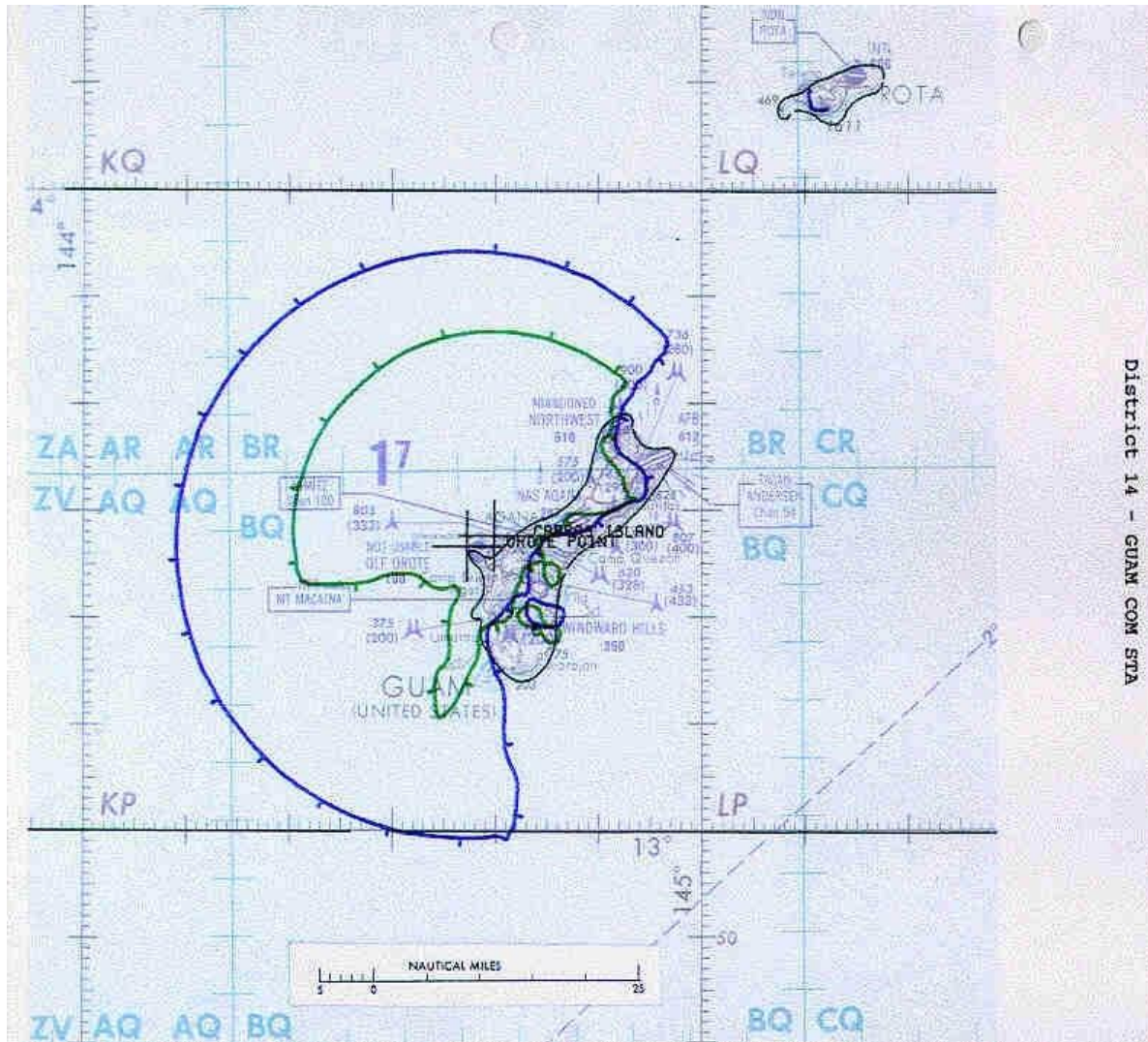
The EOC has several handheld radios and additional compatible handheld radios may be used and an individual talk group set up on the 800-MHz trunked system if programmed and coordinated by GPD’s Interoperable Communications Coordinator. Once programmed, these radios are resources available to support the response.

The U.S. Department of Defense (DOD) also has a trunked communications network consisting of a 400-MHz Motorola-based digital narrowband system that can easily be interfaced to GHS/OCD’s 800-MHz island-wide trunked system by existing console cross-patch capabilities. The DOD and USCG communications systems support secure communications, while the GHS/OCD system does not.

**1.1.4 Radio Communications – VHF/UHF**

GHS/OCD’s major communications capabilities are based on its 800 MHz island-wide trunked system. Guam’s VHF and/or UHF communications requirements and equipment are cross-patched into the 800 MHz system typically at one of the four major radio sites. The communications link is then routed back to the GPD for access. This allows for communications connectivity to customers/agencies such as the USCG, U.S. Navy helicopters, and private boat traffic. The USCG VHF communications coverage maps indicate a lack of coverage on the

northern part of Guam (where Anderson Air Force Base is located). Figure E-2 below is the USCG VHF communications coverage map for Guam.



**Figure E-2: USCG VHF Communications Coverage Map for Guam**

### **1.1.5 Radio Communications – Satellite**

GHS/OCD's satellite capabilities consist of a C-Band unit (Pacstar 5500) and a Broadband Global Area Network (BGAN) unit (Pacstar 4050) that are readily deployable and transportable. The C-Band unit is capable of providing WiFi hotspots that will support up to 92 users and provide access to satellite voice, video, and data communications. The BGAN capability provides mobile voice and data connectivity by incorporating LAN, satellite, VoIP, and analog phone technologies integrated among eight data/VoIP ports and four analog phone ports as well as a BGAN satellite modem for remote broadband access. It is expected that the emergency power for these units will come from the two 3 kW Honda gas generators currently retained by GHS/OCD. Regardless of GHS/OCD's current satellite capabilities, there will be a shortfall of satellite resources to support additional emergency responder and public communications needs.

### ***1.1.6 Radio Communications – Amateur Radio***

There is currently not an official plan in place to utilize existing amateur radio resources in support of the disaster response despite both Guam and nearby islands such as Saipan having amateur radio HF capabilities. Historically, amateur radio has not played much of a role in Guam’s disaster communications,

### ***1.1.7 Public Notification Systems***

Guam has two primary commercial radio broadcast stations – KSTO FM (95.5 MHz) and KGUM AM (570 MHz). KGUM is the primary AM station that most of Guam’s population relies upon for information during and after a disaster. KSTO FM is linked to all radio and TV stations/systems that the EOC utilizes for disaster warnings and advisories. The EOC warning and advisory information will be broadcasted over the KSTO FM broadcast system.

Guam’s single transmitter 375-watt National Oceanic and Atmospheric Administration (NOAA) radio system (162.400 MHz; Station WXM85) is currently located on Nimitz Hill (el. 643 ft.) and coverage does not extend to the southern portion of the island. NOAA is working to relocate the transmitter to a higher elevation at nearby Mt. Alutom (el.1,007 ft.).

### ***1.1.8 Wireline Telephones***

Agencies requiring communications with the continental United States (CONUS) rely on landline telephones, cellular telephones, and commercial Internet. The majority of Guam’s wire telephone capabilities are delivered through cable that is supported by telephone poles. It is expected that most of Guam’s wire telephone capability will be rendered nonoperational in the aftermath of a catastrophic typhoon. It is likely that many of the supporting poles will be damaged.

The majority of wireline telephone systems are supported by GTA, while VOIP capabilities are supported through cable television/internet interface from Marianas Cable Vision Broadband (MCV). Initial EOC wireline phone backup capabilities are to be provided by a GHS/OCD’s prepositioned deployable satellite system. There will be a shortfall for satellite communications for both voice and data between Guam and Hawaii and CONUS.

### ***1.1.9 Cellular Telephones***

Guam has four major cellular companies: Docomo Pacific, GTA (Mpulse), IT&E, and iConnect (PTT). All the commercial cellular companies have dead spots but together cover most of Guam. iConnect extends coverage to Saipan. Guam currently does not have cellular-on-wheels resources. IT&E utilizes “pole” batteries as cellular coverage backup (power) capacity even though pole batteries have proven to be highly unreliable. GTA and Docomo systems have historically survived storm-type disasters. The Guam EOC has a cellular bidirectional amplifier that enables cellular use in the facility.

### ***1.1.10 911 Capabilities***

Guam’s 911 call coverage area extends throughout most of the island with some coverage on the military bases. The existing system is Phase I wireless compliant (wireless network operators must identify the phone number and cell tower used by callers within six minutes of a request by the public safety answering point [PSAP]), but not Phase II compliant (95 percent of the network operators’ in-service phones must be E-911 compliant – “location capable” – and able to provide



latitude/longitude of callers within 300 meters within six minutes of a request by a PSAP). The system is managed by the Guam Fire Department (GFD). GFD is responsible for answering the calls and then forwarding them to the appropriate agency. The 911 capability is co-located with GPD's Tactical Communications Center (TCC) in the GHS/OCD facility.

### ***1.1.11 Internet***

Most of Guam's internet capabilities are delivered through IT&E CATV cable, which is supported for the most part by telephone poles. It is expected that most of Guam's internet capability will not be operational in the aftermath of a typhoon/wind type event as a result of damage to supporting poles. Docomo GTA and IT&E all offer and support Internet air card operation, typically a disaster-survivable capability that is likely to remain operational both during and after the typhoon.

### ***1.1.12 GHS/OCD Emergency Operations Center***

The GHS/OCD EOC has 48 work stations located next to the open bay Initial Operating Facility (IOF). The IOF can support up to 75 work stations, depending on configuration. GHS/OCD does have a backup EOC location that can only support a limited number of personnel. If the EOC becomes unusable, GHS/OCD will likely deploy its mobile communications vehicle to support a limited number of personnel at its backup location. The loss of Guam's EOC will result in a shortfall of voice, Internet, VTC, and data communications capabilities.

## **2 Mission**

Effective emergency communication capabilities (operable and interoperable communications and real-time information sharing) is a critical component of response and recovery. Time and distance considerations between Guam and CONUS and OCONUS requires robust capability.

The purpose of this appendix is to provide Guam-specific communications information to operators and planners responding to a catastrophic typhoon impacting Guam.

## **3 Execution**

### **3.1 Concept of Operations**

The overall strategy is to deploy CONUS communications assets during Phase 1c, when the confidence and clarity regarding the typhoon's track is high. Communications assets will be part of a pre-impact push package. It is highly recommended that the majority of these assets be staged in Hawaii at the onset of Phase 1c or at the FEMA DC Guam on a permanent basis to reduce transit time to Guam.

To develop an integrated territory and federal strategy for effective communications coordination in the response to a typhoon strike on Guam, communications must—

- Supplement existing territory and local communications assets;
- Ensure an accessible framework for communications and coordination during response operations immediately following typhoon impact; and

- Identify command and control (C2) entities and points of contact (POCs).

During an incident, a significant loss of fixed commercial and public safety communications infrastructure is anticipated. Existing territory communications infrastructure will be leveraged to the greatest extent possible and will be augmented through federal assets or possibly an Emergency Management Assistance Compact (EMAC).

### ***3.1.1 Response Prioritization***

In response to events or incidents that cross over political jurisdictions (villages), there will be competing demands and priorities for interoperable communications assets.

Interoperable communications should be attempted in the following order (subject to variability based on the agencies involved and the nature of the event/incident):

1. Leverage face-to-face communications wherever appropriate. The co-location of all command and general staffs at the Incident Command Post (ICP) provides the best direct communications and reduces the demand on interoperability resources.
2. Employ local communications assets until such time as either those assets become taxed or they become inadequate based on the nature and/or scope of the incident.
3. If response agencies are users of a shared system, utilize that shared system to establish interoperable communications.
4. If response agencies operate on disparate systems, utilize shared or mutual aid channels to establish interoperable communications.
5. If response agencies do not share systems or channels, utilize a gateway solution to establish interoperable communications.
6. Where interoperable communications cannot otherwise be established between response agencies, utilize swap or cache radios to establish operable communications for responders.
7. If other methods of interoperability cannot be established, relay communications through staff members.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below:

1. Disasters, large-scale incidents, or extreme emergencies requiring mutual aid or interagency communications.
2. Incidents where imminent danger exists to life or property.
3. Incidents requiring the response of multiple agencies.
4. Pre-planned events requiring mutual aid or interagency communications.
5. Incidents involving a single agency where supplemental communications are needed for agency use.
6. Drills, tests, and exercises.

In the event of multiple simultaneous incidents within the same priority level, resources should be allocated based on the following priorities:

1. Incidents with the greatest level of exigency (e.g., greater threat to life or property or more immediate need) have priority over less exigent incidents.
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options.
3. When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.

### **3.1.2 Critical Assumptions**

- It is probable that a typhoon will cause extensive damage to existing commercial and linked governmental communications infrastructure that could take several weeks or months to repair. The combined effects of typhoon associated wind, flooding, and ground water saturation will likely result in structural damage to many commercial and governmental communications facilities, including cellular towers, radio antenna towers, and telephone switching and control centers.
- Landline and cellular telephone systems will not work for at least the first day post-impact, probably longer, due to system overload and damage to cell phone towers.
- Landline-based systems (copper/fiber) may remain functional post-event, but functionality may be limited due to physical damage to connections.
- Cellular phone system coverage will not be available in certain undetermined geographic areas.
- GHS/OCD and FEMA are prepared to provide satellite voice and data capabilities for connectivity between Guam and CONUS.
- GHS/OCD Smart Net will remain operational, enabling responders and emergency managers to communicate with the EOC for the development of a common operating picture.
- Cellular towers and support buildings will require structural damage assessments/repairs.
- Satellite-based communications systems, for the most part, will be operational, although system equipment and capacity may be limited.
- Diversity and redundancy of public/private communications systems will enable some form of limited emergency communications.
- Wireless Priority Service may not be a useful tool if cell networks are down.
- Federal resources will be required, such as MERS, satellite phones, and radios; availability of resources will be determined based on current disaster declarations within FEMA Region IX or nationally.
- There will be high demand/low availability for qualified radio technicians and mechanics to work on backup generators.



- Additional communications equipment may be required to temporarily restore LMR networks for territory and local responders in remote areas and where commercial and public safety infrastructure is damaged.
- The temporary restoration of damaged communications infrastructure and fuel delivery will be inhibited by debris in mobility corridors.

### **3.1.3 Critical Considerations**

- Power outages will also occur for extended periods of time in some areas, thus interrupting the power supply to communications systems for both emergency responders and the public.
- In areas experiencing power outages, communications facilities may be forced to operate on backup power generators and/or battery backup systems (UPS - Uninterruptable Power Supplies, etc.); however, these backup power systems, in most cases, are designed to last for only 8 to 72 hours. Additionally, refueling and/or servicing of these systems may be a challenge due to fuel resources; local availability of parts and repair capabilities, access road conditions, and delivery vehicles.
- Landline and cellular telephone systems will also suffer degradation for at least the first day post-event, and probably longer, due to system overload and damage to telephone poles and cellular tower antennas.
- Limited LMR and satellite communications capabilities for responders may still be operational; however, satellite communications channels may be overwhelmed by calls and wind damage to radio antenna structures and flooding of central switching offices responsible for radio circuit routing to communications high sites may severely impact and limit first responder radio communications capabilities.
- Internet, cable TV, and off-island telephone connectivity will be severely impacted due to loss of overhead signal transport systems such as telephone poles as well as damage to underground/underwater cabling and/or wind-impacted satellite dish systems that are responsible for linking Guam to global communications networks.

### **3.1.4 Requirements**

Based on the anticipated damage to communications infrastructure, the communications assets required to supplement existing Guam communications resources to help save and sustain human lives during the initial response are as follows:

- Up to 16 800-MHz trunk-capable handsets to ensure effective communications between incoming emergency responders and local counterparts in support of command and control, evacuation, sheltering, and other emergency response missions.
- Bridging equipment to link radio systems in the incident area to the nearest gateway.
- Up to 20 Iridium satellite phones for voice connectivity of first responders in the event that the island-wide 800-MHz system is rendered nonoperational.
- Satellite terminals with voice telephone, internet, and VTC capabilities.
- Verizon-based cellular telephones.

### 3.1.5 Shared Communications Resources

#### Guam Shared Systems

“Shared system” refers to a single radio system used to provide service to several public safety or public service agencies. The table below lists the radio system shared by more than one public safety or service agency operating on Guam.

System Name	Make / Model	Type	Freq Band	Service Area
GHS/OCD Public Safety Communication System (800 MHz Trunked AMSS/SmartNet)	Motorola AMSS/SmartNet T5219A	Analog/Trunked	800 MHz	Island-wide

**Table E-2: GHS/OCD Public Safety Communication System**

#### *Region-wide Shared System Policies and Procedures*

To achieve interoperability throughout the GGSCS, certain talk groups have been created to support GHS/OCD users requiring interoperable communications. These talk groups are labeled INTEROP 1 through 10. These INTEROP talk groups will appear as a resource on both GPD TCC and GFD E-911 dispatch consoles. This feature will allow either the dispatch center to patch any talk group to any other talk group on the GGSCS. Dispatchers at either dispatch center can verify if interoperable talk groups are being used and have the flexibility to assign any talk group to a responder outside the GGSCS. General interoperable communications rules of use, policies, and procedures that apply across the GGSCS are detailed below.

#### *Island-wide Shared System Rules of Use*

**National Incident Management System-Compliant** – Incident Command System (ICS) must be compliant with the National Incident Management System (NIMS) when using any regional interoperability resource.

**Plain Language** – All interoperable communications during multi-agency, multi-discipline incidents will be in plain language. Avoid using radio codes, acronyms, and abbreviations, as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.

**Unit Identification** – Announce your home agency prior to announcing your unit identifier during interoperable communication situations (i.e., GPD Alpha-two calling GFD Medic-one).

#### *Island-wide Shared System Procedures*

Use the following procedures when requesting, using, or discontinuing the use of shared communication systems assets:

- When an individual responder needs to interoperate with another agency on their same shared system, the responder will notify their dispatch center. The dispatcher can then identify and designate an appropriate talk group or patch two talk groups together. Note that in cases where no dispatcher intervention is required, responders still notify dispatch that they are switching to a shared talk group to maintain responder safety. In the case of

dispatchers designating the use of INTEROP one through ten, the dispatcher shall notify the Interagency Coordinating Council (ICC).

- Notify dispatch when the interoperability talk groups or patches are no longer required and announce the return to normal operations talk groups.

For extended incidents:

- The lead agency dispatcher notifies the Communications Unit Leader (COML), or designee, that interoperability talk groups or patches are in use.
- Each agency's dispatch center tells additional en route responders what interoperability talk groups are in use for the incident.
- The Incident Commander, or their designee, determines when the interoperability channels are no longer required and the COML notifies the appropriate dispatch center.

#### ***Island-wide Shared System Problem ID and Resolution***

Agencies should identify and resolve problems through the ICC. Significant concerns can be brought to the Interoperability Communications Working Group for further discussion.

During an incident:

- During activation, report-shared system problems to the COML or their designee assigned to the staff of the incident/event, who will follow established agency procedures to resolve the problem.
- Agencies using a shared system will report any problems with that system directly to the Guam ICC. The Guam ICC ensures effective resolution to reported shared system problems.

#### **Gateways**

“Gateway” systems interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles that are able to create patches will also be captured as gateways. Gateways and use of the same are referenced and listed in Guam's *Tactical Inoperability Communications Plan*. The fixed gateways utilized on Guam are various models of Motorola Console Systems.

#### ***Primary Public Safety Frequencies***

See the *Guam Statewide Communications Plan*, *Tactical Inoperability Communications Plan*, and *Emergency Communications Plan*.

### **3.2 Tasks by Phase**

#### ***3.2.1 Phase 1 (Pre-Incident)***

**Operational Focus:** Situational awareness and preparedness.

## Primary Actions

### *GHS/OCD*

- Ensure currency of the Guam *Comprehensive Emergency Management Plan* (CEMP).
- Ensure that EOC emergency communications equipment is continuously used and exercised by conducting communications daily checks with other Guam, federal, and/or local agencies.
- Ensure operational capability and monitor status of territory-wide alert and notification systems.
- Participate in training and/or exercises that support emergency communications proficiency.
- Participate in multi-jurisdictional exercises to establish working relationships.
- Maintain a list of critical POCs involved in the restoration of emergency communications equipment and/or systems after an emergency.
- Maintain a list of critical communications nodes that includes their location, capabilities, and alternate access methods.
- Ensure continuous coordination with public switched telephone networks (PSTNs) to ensure awareness of changes, upgrades, etc., to related equipment and systems.
- Ensure radio site generators are fueled and operational.
- Ensure continued testing of emergency and/or standby emergency communications equipment to ensure operational readiness.
- Ensure coordination of relevant communications issues with the Region IX Regional Emergency Communications Coordinator (RECC).

### *FEMA*

- **MERS:** Maintain emergency communications equipment and system capabilities in a constant state of readiness for potential deployment in the event of a disaster.
- **Region IX RECC:** Meet regularly with Guam emergency communications POCs to discuss, coordinate, and/or resolve communications issues; observe and/or participate in GHS/OCD communications-related meetings and conferences to establish and maintain working relationships between GHS/OCD and FEMA; and establish and maintain procedures for deployment of Disaster Emergency Communications (DEC) Division restoration capabilities, to include FEMA Headquarters (HQ) Disaster Emergency Group Supervisors (DEGS) and FEMA Office of Emergency Communications ESF #2 representatives.

### 3.2.2 *Phase 1c (Near Certainty)*

**Operational Focus:** Execute preparedness and protective measures for on-island resources and capabilities.

## Primary Actions

### *GHS/OCD*

- Activate the Territory of Guam’s ESF #2.
- Activate phone bridge between GHS/OCD and all appropriate Guam departments, local agencies, IMAT, the DCO, appropriate ESFs, the National Weather Service (NWS), and FEMA Region IX.
- Protect and safeguard critical emergency communications resources prior to impact in order to ensure operability and accessibility post-impact.
- Alert and identify required communications resource providers and on-hand communications asset inventories.
- Identify and coordinate follow-on fuel distribution for generators supporting critical island communications sites.

### *FEMA*

- Activate the FEMA Region IX Regional Response Coordination Center (RRCC) at Level 1 and ensure activation and deployment of ESF #2 resources.
- Begin initial identification and coordination of a Federal Staging Area (FSA) on Guam and Incident Support Bases (ISB) in Hawaii and on the U.S. West Coast in anticipation of the deployment of emergency communications initial response resources (IRR) to Guam.
- Identify and prepare initial MERS coordination and communications response personnel and DEC resources for deployment to Region IX or Hawaii to meet up with the Region IX Incident Management Assistance Team (IMAT team and/or IMAT-West).

### **3.2.3 Phase 2 (Incident and Incident Response)**

**Operational Focus:** Conduct initial assessments, activate supplemental resources for assistance, and prioritize restoration activities for recovery.

## Primary Actions

### *GHS/OCD*

- Conduct initial assessments of DEC resources/capabilities and report to Guam EOC the status of critical equipment and/or systems, to include:
  - Public Warning/Notification Capabilities
    - EAS – Emergency Alert System
    - Siren/Public Address Systems
    - Cellular SMS/Text Capabilities
    - 911 Telephone
    - Commercial AM/FM Radio Stations
    - Integrated Public Alert and Warning System

- Commercial Cable TV
- Commercial Antenna/Digital TV
- NOAA Radio
- Emergency/Operational Communications Capabilities
  - LMR Interoperability
  - Tactical Support Radios
  - Tactical Satellite Capabilities
  - National Alert & Warning System Telephone
  - Pre-identified Emergency Shelter Communications
- Communications Backbone/Infrastructure Capabilities
  - Emergency Responder Communication Circuits
  - Cellular Telephone Equipment and Towers
  - Wireline Telephone
  - Internet Access
  - Central/Communications Office Support
  - Major Communications Transport – Microwave, Telephone Poles, etc.
- Re-establish and/or maintain functionality of networked island-wide communications equipment and systems.
- Ensure delivery of fuel to generators supporting emergency communications equipment and systems.
- Ensure access to emergency communications radio systems and networks.

### *FEMA*

- Deploy FEMA DEC DEGS, RECC, and Tactical and Communications Restoration (ESF #2) Task Force Leaders to meet up with the deployed IMAT team.
- Deploy MERS Coordinator and Communications Specialist to Region IX or Hawaii to meet up with the Region IX IMAT team and/or IMAT-West.
- Deploy MERS initial portable emergency communications equipment and systems capable of supporting users with VHF, UHF, satellite, and VTC capabilities.
- Ensure MERS coordination of initial frequencies with the FEMA Frequency Manager; prepare the ICS 205 for the FEMA Frequency Manager to document frequency usage among the response community.
- Coordinate use of 20 pre-identified GHS/OCD trunked radios with the GHS/OCD Interoperability Coordinator.

- Upon arrival, the DEGS and/or RECC, in coordination with GHS/OCD, will assess the status of Guam’s disaster emergency communications capabilities and facilitate resolution of shortfalls for the same.
- Upon arrival, MERS, in coordination with GHS/OCD, will assess the emergency communications environment and immediately request, if necessary, additional MERS resources required to augment and resolve GHS/OCD emergency communications capability shortfalls.

#### **4 Administration, Resources, and Funding**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

#### **5 Oversight, Coordinating Instructions, and Communications**

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## Appendix F: Public Information and Warning

### 1 *Situation*

A catastrophic typhoon strike on Guam will render most conventional public messaging methods ineffective or significantly degraded. This will require the use of various other methods to convey public safety messages, evacuation instructions, sheltering information, and other information that must be reported to the public. All methods should be considered and none should be ruled out, particularly during the first 48 to 72 hours post-impact.

The typhoon may generate extensive, sustained media attention that may overwhelm Guam's Emergency Support Function (ESF) #15 capabilities.

### 2 *Mission*

The mission of public information and warning is to engage, inform and educate all FEMA stakeholders in support of the Agency's programs and initiatives to achieve its mission.

### 3 *Execution*

#### 3.1 *Concept of Operations*

ESF #15 provides coordinated, accurate, and timely information to government agencies, the private sector, news media, residents, and visitors of the Territory of Guam, including important warnings and instructions for protecting lives and property.

The overall strategy is to deploy federal continental United States (CONUS) communications assets for ESF #15 prior to typhoon landfall, when the confidence and clarity of the storm's track is high. Communications assets may be part of the pre-landfall push package, which includes equipment and personnel. ESF #15 will work with the FEMA Logistics Management Directorate (LMD) to define and update communications push package requirements.

Broadcast production cameras, still cameras, laptops, and software are part of a push package that will be provided to FEMA Region IX by FEMA Headquarters (HQ) EA staff for social networking and public information in Phase 1b. In Phase 1c, broadcast operations teams will be supplemented by FEMA HQ EA staff to begin capturing images pre- and post-impact for territorial and FEMA use.

Individual Assistance (IA) and Disaster Survivor Assistance (DSA) teams will need to print and distribute large quantities of tele-registration flyers in the first 72 hours following a catastrophic typhoon. DSA staff will communicate requirements to ESF #7 so they may source printing companies and other resources pre-impact.

Additional communications assets may need to be identified in order to supplement existing local resources, prepare for the anticipated extent of damage to the commercial communications infrastructure, and address requirements for providing lifesaving emergency public information.



### ***3.1.1 Incident Support***

#### **Guam**

The Governor of Guam's Office of Communications oversees the Governor's media relations efforts through its web-based communications, social media platforms, print and video informational materials, events, and other external communications efforts. Guam ESF #15 provides support for the following four essential functions:

- Emergency Public Information
- Legislative Affairs
- Private Sector Coordination
- Local Coordination

### ***3.1.2 Incident Management***

#### **Federal**

Federal ESF #15 resources will mobilize in Phase 1b to ensure maximum coordination on public messaging. Federal ESF #15 supports Guam with the following functions and resources:

- Joint Information Center (JIC)
- Planning and Products
- Congressional Affairs
- Intergovernmental Affairs
- Private Sector Coordination

The Governor of Guam (or the Guam Homeland Security Advisor) and the Administrator of the Guam Homeland Security/Office of Civil Defense (GHS/OCD) activate Guam ESF #15 operations. The Assistant Secretary for Public Affairs for the U.S. Department of Homeland Security (DHS) activates federal ESF #15 operations and appoints the External Affairs Officer (EAO). Prior to a disaster declaration, Government of Guam (GovGuam) EA activities will be the responsibility of the respective departments and agencies and do not require coordination with ESF #15. After a Presidential Disaster Declaration, ESF #15 operations will transfer from the GHS/OCD Emergency Operations Center (EOC) to the Joint Field Office (JFO). When the JFO demobilizes, ESF #15 operations will transfer back to the EOC.

The EOC will establish a JIC to serve as the principal source for public information. FEMA will provide an ESF #15 representative to the JIC to provide information on FEMA response efforts and to support the territory in joint messaging. Messages produced by ESF #15 personnel will follow the Joint Information Systems (JIS) model, as outlined in the National Response Framework (NRF).

### ***3.1.3 Critical Considerations***

- Pre-deployment of trained media relations specialists and local JIC field officers will be critical in ensuring that accurate and timely information is distributed to the public and

media throughout the event, minimizing the amount of misinformation that reaches the general population.

### **3.1.4 Critical Assumptions**

- Residents and visitors to Guam will be provided with clear, concise information that is sustained, coordinated, and consistent across all levels of government. Announcements will include information regarding shelters, medical facilities, evacuation and re-entry, hazardous materials (HAZMAT) areas, reunification programs as required, and response and recovery operations.
- Local EA staff/public information officers (PIOs) may be personally affected by the disaster and may be unable to perform emergency duties.
- Disseminating information to access and functional needs and medical needs populations will require additional services, including sign language interpreters and closed-caption message broadcasting, contracting for which will be handled by FEMA HQ's multi-lingual operations.
- The Unified Coordination Group (UCG), in coordination with ESF #15, will brief Guam legislators, as necessary. The FEMA Office of Legislative Affairs may be challenged by numerous requests for information from congressional offices and committees in Washington, D.C., especially given the large military presence on Guam. Accurate updates to those parties will be facilitated through consistent FEMA HQ and FEMA region communications with field representatives.
- Press conferences will need to be conducted as soon as possible and will depend on the availability of the territory/federal officials responsible for providing situational information to the White House, DHS, and FEMA HQ.
- Power outages and the destruction of homes may severely limit reception of emergency transmissions.
- Cellular communications and text messaging capabilities are expected to be severely degraded or non-existent.
- The Emergency Alert System (EAS), which is designed to deliver emergency messages via broadcast stations direct from local, territory, or federal authorities, will be rendered only partially operable due to damaged towers and facilities.
- Journalists and media personnel in Guam may be personally affected by the storm and may not be able to assist in emergency communications functions.

## **3.2 Tasks by Phase**

External Affairs executes support through a phased response.

### **3.2.1 Phase 1a (Normal Operations)**

**Operational Focus:** Situational awareness and preparedness.

### **Primary Actions**

- ESF #15 has developed and actively manages a comprehensive multi-media emergency information program that places an emphasis on family preparedness through coordinated print and broadcast outlets as well as press conferences and briefings.
- ESF #15 (GHS/OCD) provides risk communications information to the public.

#### **3.2.2 Phase 1b (Increased Likelihood)**

**Operational Focus:** Information gathering and networking with leadership for messaging.

### **Primary Actions**

- Federal ESF #15 is activated.
- Deploy ESF #15 with FEMA Incident Management Assistance Team (IMAT). FEMA's EAO and JIC field officers deploy pre-impact to support and provide personnel resources to facilitate the delivery of communications and emergency information to affected populations as soon as possible post-impact.
- ESF #15 (GHS/OCD) coordinates with ESF #3 on pre-impact messaging designed to encourage water storage and post-impact messaging related to "boil water" orders. The Guam Waterworks Authority (GWA) decides whether any "boil water" notices will be issued post-impact and coordinates messaging with the JIC.
- ESF #15 (GHS/OCD) develops emergency public information messages, in coordination with local utilities through ESF #12.
- The emergency public information function is a GHS/OCD responsibility. GHS/OCD is responsible for developing and releasing information about emergency operations to the news media, personnel involved in the response and recovery operations, and other appropriate agencies and organizations. Additional support may be drawn from other local agencies or volunteers. The GHS/OCD PIO activates and directs public information procedures.
- All agencies involved in disaster response will staff representatives to the JIC.
- Implementation of JIS ensures a "one message, many voices" approach, incorporating representatives across multiple jurisdictions and entities.

#### **3.2.3 Phase 1c (Near Certainty)**

**Operational Focus:** Integrate with Guam ESF #15 and establish JIC.

### **Primary Actions**

- ESF #15 is part of the Command Staff, as designated in the National Incident Management System (NIMS), and provides appropriate representatives available to deploy rapidly to the incident location and other information-critical venues within the affected area. FEMA and other federal agencies will provide the necessary operational, strategic, logistical, and administrative support to carry out an effective public and governmental information campaign throughout all phases of the disaster. Federal agency

communications and public affairs personnel will be assigned, when possible, to the JFO ESF #15 function to coordinate territory and federal messaging.

- A broadcast operations team deploys and reports to Guam.
- Federal and Guam ESF #15 personnel develop and implement a joint communications strategy.
- Federal ESF #15 coordinates with GHS/OCD and informs the public of shelter locations and their status. GHS/OCD identifies and communicates additional shelter locations and other ESF #6 assistance, as needed.
- ESF #15 releases preparedness messaging to the public in anticipation of the typhoon's impact.
- ESF #15 coordinates emergency public information messages to inform visitors to Guam during events (including coordinating with hotels, airlines, and travel agencies).
- ESF #15 coordinates messaging with the U.S. Department of Agriculture (USDA), U.S. Department of State (DOS), and DHS Transportation Security Administration (TSA). The DOS coordinates and collaborates with all foreign nationals.
- ESF #15 implements emergency public information messages to encourage the public to fill all fuel tanks. All fuel messaging will be coordinated through ESF #12, including collaboration with the private sector petroleum industry for future announcements.
- ESF #15 and ESF #1 distribute emergency information messages.
- ESF #15 releases emergency public information on the deployment status of federal assets activated in support of the anticipated needs of Guam.
- DHS is likely to initiate a territory/federal National Incident Communications Coordination Line (NICCL) to discuss messaging strategy and to share information on actions taken.
- Other messaging is developed, to include but not limited to the following:
  - Definition of roles/responsibilities at the territory/federal/local levels.
  - Multi-lingual operations at FEMA HQ, in coordination with ESF #15, to begin developing messaging products in multiple languages for distribution.

### **3.2.4 Phase 2 (Incident and Incident Response)**

**Operational Focus:** ESF #15 publicizes through the media response activities that directly impact or benefit affected communities. Publicized activities may include the location of shelters and feeding stations, health and safety information, the location of comfort stations, “boil water” orders, road closure information, school and office closing information, and environmental hazards.

#### **Primary Actions**

- GHS/OCD will be the lead entity to provide disaster information to Guam officials.

- During activations for emergencies and disasters, emergency public information functions are carried out through the EOC.
- FEMA will provide ESF #15 personnel to serve in the EOC and coordinate messaging with territory personnel.
- Once a JFO is operational, emergency public information functions will be transferred from the EOC to the JIC at the JFO.
- Coordination with other territory and local entities will be necessary to ensure accuracy and consistency in the delivery of emergency public information messages.
- GHS/OCD will coordinate with FEMA on information provided to territory and legislative members.
- Federal ESF #15, in coordination with Guam ESF #15, will coordinate outreach to the Mayors' Council of Guam (MCOG) on federal issues.
- The FEMA Congressional Affairs Unit will coordinate with GHS/OCD on the exchange of information to members of Congress, as appropriate.
- The release of joint information to the news media and any press conferences/interviews held with territory and federal officials will also be coordinated with GHS/OCD.
- The FEMA Planning and Products Unit will develop all written materials, fact sheets, talking points, and briefings in coordination with GHS/OCD.
- ESF #15 coordinates with the DOS, ESF #6, and FEMA HQ (International Affairs) to establish protocols for communications with foreign consulates and the public and provide information concerning ongoing evacuation operations. FEMA HQ coordinates all foreign requests through the DOS.
- ESF #15 conducts public messaging to manage expectations and reassure the public regarding mass care and emergency assistance operations.
- If space allows, ESF #15 begins holding daily press briefings in the JFO.
- ESF #15 coordinates and deploys additional ESF #15 staff as required.
- ESF #15 coordinates congressional delegations and other VIP visits.
- Broadcast operations teams deploy to affected areas and shelters to start capturing images (shelters, typhoon damage, logistics centers, commodity movement operations, staging areas).
- ESF #15 develops other life-safety messaging as well as messaging on Guam/federal response priorities. Products include, but are not limited to:
  - Press releases (FEMA HQ prepares initial overall national response press release)
  - Talking points
  - Social media posts
  - Fact sheets
  - Congressional advisories

### 3.2.5 Phase 3 (Recovery)

**Operational Focus:** ESF #15, working in conjunction with EOC staff, responds to media inquiries for damage assessment statistics and estimates. In coordination with FEMA, ESF #15 publicizes the status of any emergency or disaster declarations, the types of assistance available to survivors, and recovery center location information.

#### Primary Actions

- Providing messaging on recovery-related topics, such as—
  - Information on how to access assistance from local, federal, and nongovernmental entities.
  - FEMA and the U.S. Small Business Administration registration/assistance process.
  - Disaster Recovery Center (DRC) capabilities/hours of operation/locations.
- ESF #15 will assist GovGuam in creating emergency public information messaging to encourage tourism in order to minimize economic impacts on Guam and promote economic recovery.
- FEMA’s Private Sector Unit will coordinate with local businesses on the delivery of joint messages to private sector employees through private sector communications channels. Outreach will include coordination with ESF #17 for collaboration with the travel industry. Under most conditions, emergency information is disseminated to the public through the news media. News organizations often act as the conduit through which critical information flows from authoritative sources and decision makers to the public.
- If commercial broadcasting operations remain functional post-impact, the normal handling of media relations and media operations remains in effect, including:
  - News conferences/briefings
  - News releases
  - Territory/federal official participation in live programming
  - News updates on social media and websites

## 4 Administration, Resources, and Funding

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

## 5 Oversight, Coordinating Instructions, and Communications

See Base Plan of this *2018 Guam Catastrophic Typhoon Plan*.

### 5.1 Oversight

#### 5.1.1 ESF Coordinator/Primary Agency: GHS/OCD

- Oversee media relations, including media monitoring.

- Coordinate emergency public information activities to ensure consistency and accuracy of information released to the general public through the Guam JIC.
- Coordinate information sharing among all agencies involved in incident management.
- Notify support agencies of the need to staff ESF #15 during an incident.
- Establish and maintain the Guam JIC and media center.

**5.1.2 Primary Agency: Governor’s Communications Office**

- Establish priorities for external communications.
- Approve and schedule joint press conferences.

**5.1.3 Primary Agency: Guam National Guard (GUNG) Public Affairs**

- Establish contact with legislators representing affected areas to provide information on the incident.
- Respond to territory legislative and congressional inquiries.
- Provide escort and itinerary support for legislative and congressional visits.
- Provide additional public affairs support, as needed.

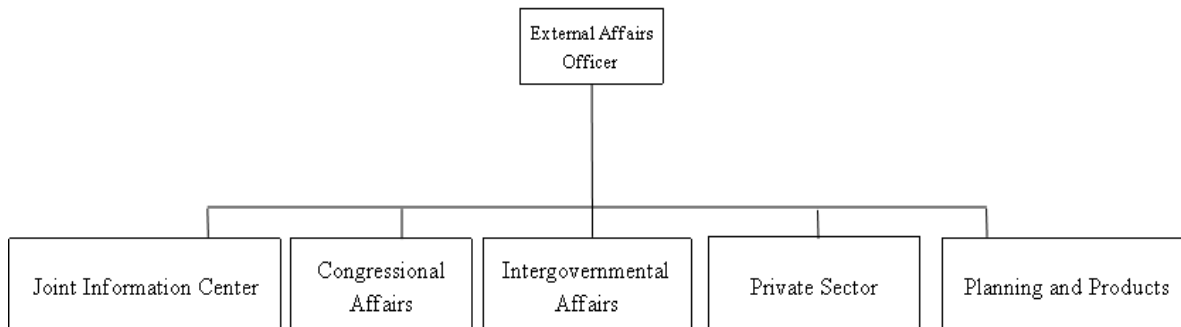
**5.1.4 Support Agency: FEMA**

- Support Guam in providing critical information to the public.
- Implement the federal ESF #15 mission, as outlined in the ESF #15 Standards of Procedure (SOP).

**5.1.5 Support Agency: Joint Region Marianas (JRM)**

- Support Guam in providing critical information to the public post-impact.
- Support the JIC pre-impact, once established.

**ESF 15 Organizational Chart**



**Figure F-1: Federal External Affairs Organization Chart**

## Appendix X: Execution Checklist

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Guam Homeland Security/Office of Civil Defense (GHS/OCD) and the Guam Power Authority (GPA) coordinate on the development of a consolidated and prioritized list of critical facilities for power restoration.
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD and GPA identify generator requirements and map those requirements to the generator inventory.
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD ensures that the Geographic Information System (GIS) database is coordinated with all member agencies of the Power Restoration Task Force (PRTF).
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA and GHS/OCD assess the capabilities of GPA generators at designated essential facilities and ensure that all inoperative generators are repaired/returned and are maintained in an operational status.
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD develops an emergency power fuel and maintenance prioritization plan based on initial assessments and adjusts the plan accordingly as island power is restored.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD will conduct an assessment of any identified critical facility without backup power, determine the requirements and priority for emergency power generation post-storm, and coordinate findings with U.S. Army Corps of Engineers (USACE)/ESF #3 and FEMA Operations.
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA will assess power infrastructure requirements and capabilities and report the status and any shortfalls to GHS/OCD monthly.
1			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	JFO	USACE	USACE will provide for GPA use and awareness assessment data from previous temporary emergency power missions executed on Guam.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	JFO	USACE	GHS/OCD, GPA, and FEMA coordinate on the execution of a Mission Assignment (MA) with USACE and the U.S. Department of Energy (DOE) to provide ESF #3 and ESF #12 liaisons to the PRTF and to pre-position assets to execute a temporary emergency power mission that includes a USACE Emergency Power Planning and Response Team (PRT), 249th Engineer Battalion personnel, and ACI contractor assets.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	JFO	USACE	Federal agencies deploy initial elements from their organizations to conduct pre-impact planning and coordination.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	JFO	USACE	Form a PRTF.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF gains and reports the status of all GHS/OCD facilities identified as critical infrastructure.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA executes its typhoon standard operating procedures (SOPs) and preparedness checklist.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA activates and recalls essential personnel (by position) in order to perform preparedness activities.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA increases the number of crews performing tree-trimming operations around power lines.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA management stands up the GPA Incident Command Post.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA tops off fuel at facilities equipped with emergency backup power generation maintained by GPA.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA, Guam Waterworks Authority (GWA), and Guam Department of Public Works (Guam DPW) conduct vegetation control.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA conducts inventory and equipment assessments.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #12 provides 2 DOE personnel.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #3 provides 8 personnel to form a management team, 10 personnel from the 249th Engineer Battalion, and 2 personnel ACI ADVON team.
1			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Conduct Emergency Power assessment.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	RRCS	USACE	Deploy additional 10 personnel from 249th Engineer Battalion and 8 ACI ADVON Team personnel pre-storm.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD coordinates the establishment of the PRTF.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #3 coordinates a power inter-agency conference call with FEMA, USACE, USACE contractors, and the DOE. ESF #3 alerts the PRT, 249th Engineer Battalion, and contractors.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD ensures all emergency power generator fuel requirements are met prior to storm impact.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates and expedites the mobilization of generator repair parts or replacements at critical facilities that meet generator type, kind, and capability requirements.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA, Guam DPW, and GHS/OCD coordinate with ESF #3 and ESF #7 on requesting federal support for additional generators to meet temporary power requirements at critical facilities.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Transition water pumps at well locations from the power grid to emergency generators to support water supply post-impact.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	All deployed teams and resources shelter in place.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #3 Emergency Power PRT provides technical advice and conducts pre-installation inspections.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA conducts inventory and equipment assessments.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA moves critical resources to hardened DOD facilities prior to impact to ensure that capability is maintained post-impact.
1			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Additional PRT and contractor resources begin staging at the continental United States (CONUS) Incident Support Base (ISB).
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD develops an emergency power fuel and maintenance prioritization plan based on initial assessments and adjusts the plan accordingly as island power is restored.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF monitors and supports GPA deployment of GPA/FEMA assessment teams to conduct damage assessments and perform repairs to the electrical power infrastructure at critical facilities.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF and GPA coordinate priorities for power restoration utilizing the GHS/OCD critical infrastructure list.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF develops a power restoration plan based on initial assessments to the power grid conducted during Phase 1a.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Guam DPW and Department of Defense (DOD) conduct priority route debris clearance operations to ensure deployment of resources and capabilities to critical facilities.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA initiates a memorandum of understanding (MOU) with the American Public Power Association (APPA).
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF identifies, orders, and identifies transportation options for priority transformers, wires/lines, power meters, and poles.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF and FEMA coordinate the deployment of ESF #3, ESF #12, and FEMA Operations staff to assist in technical assessments of generator requirements and to assist in the installation of emergency generators, as needed.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates with the GPA I to ascertain the status of ongoing GPA power restoration operations and to establish power restoration priorities with the Unified Coordination Group (UCG).

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	The PRTF supports GPA asset replacement ordering to enable the timely repair and restoration of emergency power capabilities until island power is restored.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD coordinates the mobilization and deployment of available Guam National Guard (GUNG) generators based on generator type/kind/capability, as needed, to augment emergency power availability or to replace failed generators.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates with ESF #7 and ESF #3 to source and lease available on- or off-island generator assets, as needed, to augment emergency power availability or to replace failed generators
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	The PRTF coordinates augmentation of GPA resources by mobilizing any available GUNG assets, mission assigning DOD for support, and/or executing MOUs with off-island power agencies.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7 coordinates with the PRTF to source transportation resources and provide logistical support for moving off-island assets to Guam.
1			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	RRCS	USACE	Prioritize Emergency Power installations.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	RRCS	USACE	ACI contracts for personnel and equipment.
1			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	RRCS	USACE	Additional power installations conducted.
1			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF develops an emergency power fuel and maintenance prioritization plan based on power grid assessments and adjusts the plan accordingly as island power is restored.
1			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF calls forward ACI contract personnel and equipment, as appropriate, based on current assessments of power grid, estimates of power restoration, and workload of GPA and 249th Engineer Battalion.
1			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates emergency power generation installations as required and/or directed.
1			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD sustains and maintains an emergency power fuel and maintenance prioritization plan based on its understanding of the critical facilities that are running on temporary power and adjusts the plan accordingly as island power is restored.
1			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	As island power is restored, GHS/OCD and the PRTF conduct maintenance and services on equipment depending on usage.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA's execution of emergency services/support contracts with on-island vendors to provide generator repair, specialized equipment, and resource replacement generators as necessary.
1			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA asset replacement ordering to enable the timely repair and restoration of emergency power capabilities until island power is restored.
1			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7 coordinates with the PRTF to source transportation resources and provide logistical support for moving off-island assets to Guam.
1			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	As island power is restored, GHS/OCD and the PRTF maintain situational awareness of uninstalled generators and their locations in the event that repositioning is required.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	UCG implements demobilization procedures in accordance with the demobilization plan.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination of the demobilization and transport of any FEMA-owned or FEMA-leased generators back to their points of origin.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination of the demobilization and transport of any mobilized GUNG generators and/or assets back to their points of origin.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination of the demobilization and transport of any off-island power restoration personnel and equipment back to their points of origin.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	As needed, the PRTF supports GPA's termination of emergency services/support contracts with on-island vendors that provided equipment and personnel in the repair of storm-damaged equipment.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA and Guam Environmental Protection Agency (EPA) efforts to dispose of hazardous materials (HAZMAT) debris (on- or and/or off-island, as required) and restore HAZMAT staging sites to their original condition.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Once normal operation of Guam's electrical power infrastructure is restored, the PRTF and GPA Incident Command Post stand down and all agencies resume normal operations.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7, in coordination with the PRTF, sources transportation resources and provides logistical support for moving any on- or off-island power assets back to their points of origin.
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	When no longer required (emergency generators have been uninstalled and transported to their points of origin), PRTF coordinates the redeployment of USACE/ESF #3 power assets.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
1			3A	TBD	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	FEMA supports GPA coordination of the demobilization and transport of any mission-assigned DOD generators and/or assets back to their points of origin.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD and GPA coordinate on the development of a consolidated and prioritized list of critical facilities for power restoration.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD and the GPA identify generator requirements for facilities certified as critical infrastructure and map those requirements to the generator inventory.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA and GHS/OCD assess the capabilities of GPA generators at designated critical infrastructure facilities and ensure a priority of repair is conducted to maintain all critical facilities in an operational status.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA ensures required tree trimming around power lines is accomplished to mitigate the occurrence of tree branch damage to power lines during high winds.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD conducts an assessment of any identified critical facilities without backup power capability, determines the requirement and priority for emergency power generation post-storm, and coordinates findings with USACE/ESF #3 and FEMA Operations.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA assesses power infrastructure requirements and capabilities and reports the status and any shortfalls to GHS/OCD monthly.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA assesses and monitors GPA typhoon stock levels to ensure that the required asset inventory is maintained as necessary for the timely restoration of the electrical power infrastructure. GPA coordinates shortfalls with GHS/OCD.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA assesses and maintains power restoration MOUs with off-island agencies to ensure that the anticipated resource capabilities needed for recovery are available.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD ensures that the GIS database is coordinated with all member agencies of the PRTF.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	USACE provides for GPA use and awareness assessment data from previous emergency power missions executed on Guam.
2			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	FEMA Logistics provides an inventory of FEMA generators on Guam to PRTF members for situational awareness and pre-event planning purposes.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA executes its typhoon SOPs and preparedness checklist.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA activates and recalls essential personnel (by position) in order to perform preparedness activities.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA increases the number of crews performing tree-trimming operations around power lines.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA management stands up the GPA Incident Command Post.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA coordinates with GWA to ascertain the status of GWA emergency generators located at water wells and booster station sites and determine GWA's overall emergency power generation needs.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD, GPA, Guam Department of Education (GDOE), Guam Memorial Hospital (GMH), and FEMA coordinate with non-GHS/OCD agencies whose facilities are listed as critical infrastructure to ascertain the operability of emergency power generation (GMH).
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Deploy USACE coordination team to Guam.
2			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Coordinate facility generator assessments to determine suitability for a generator and the location for its placement and to ensure that it matches with the correct generator configuration.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Deploy USACE's Power PRT from the Honolulu district.
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD coordinates the standup of the PRTF. The PRTF's main operational location will be the GPA Incident Command Post.
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA coordinates with off-island MOU signatories to establish resource availability/capability and to alert those resource agencies of the possible need for support.
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GPA, Guam DPW, and GHS/OCD coordinate with ESF #3 and ESF #7 on identifying and preparing for movement of additional generator assets from Distribution Centers (DCs).
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA moves critical resources to hardened DOD facilities prior to impact to ensure that capability is maintained post-impact.
2			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GHS/OCD, GPA, and FEMA, through the PRTF, coordinate on the execution of an MA with USACE and DOE to provide ESF #3 and ESF #12 liaisons to the PRTF and to pre-position assets to facilitate power restoration efforts post-impact.
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports island power restoration by gaining power grid situational awareness and prioritizing power restoration based on critical infrastructure priority list.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA transportation requirements to move all power-related debris to a designated GPA site in order to facilitate reuse of salvageable parts and materials.
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA, ESF# 3, and ESF #10 on the development of HAZMAT staging sites and the disposal of HAZMAT debris resulting from storm damage.
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates the augmentation of GPA resources by mobilizing any available GUNG assets, mission assigning DOD for any available assets, and/or executing MOUs with off-island power agencies, as needed.
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7 coordinates with the PRTF to source transportation resources and provide the logistical support necessary to move off-island assets to Guam.
2			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF, ESF #15, and the Joint Information Center (JIC) will continue issuing public service announcements (PSAs) outlining the dangers of downed power lines and the procedures for reporting them.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA executes existing MOUs with the APPA to gain additional restoration capabilities on Guam. MOU execution is based on assessments from both GPA and the PRTF.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF coordinates and resources augmentation to GPA's six overhead and three underground line crews, as required.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7 coordinates with the PRTF for the movement of power restoration resources from CONUS to Guam in support of GPA.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA is resourced with sufficient crews to conduct 24-hour operations.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA and the PRTF coordinate on the shutdown of temporary power generation for critical infrastructure as island power is restored.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Ensure sourcing/procurement, delivery, installation, operation and maintenance of generators are consistent with priorities set.
2			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Support fuel requirements for installed generators.
2			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF continues to monitor and report island power restoration and prioritize connection projects requiring off-island resources. As power is restored to critical facilities and existing customers are reconnected, PRTF begins the re-deployment of off-island resources and coordinates their movement back to their points of origin.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
2			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7 coordinates with the PRTF for the return of power restoration resources from Guam to CONUS in support of GPA.
2			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	GPA remains resourced with sufficient crews to conduct 24-hour operations and restore island power to existing customers.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	UCG implements demobilization procedures in accordance with the demobilization plan.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination for the demobilization and transportation of any FEMA-owned or FEMA-leased generators back to their points of origin.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination for the demobilization and transportation of any mobilized GUNG generators and/or assets back to their points of origin.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA coordination for the demobilization and transportation of any off-island power restoration personnel and equipment back to their points of origin.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	As needed, PRTF supports GPA's termination of emergency services/support contracts with on-island vendors providing equipment and personnel to repair storm-damaged equipment.



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2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	PRTF supports GPA and Guam Environmental Protection Agency (Guam EPA) efforts to dispose of HAZMAT debris (on- or and/or off-island, as required) and restore HAZMAT staging sites to their original condition.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	Once normal operation of the electrical power infrastructure is restored, PRTF and GPA Incident Command Post stand down and all agencies resume normal operations.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	ESF #7, in coordination with the PRTF, sources transportation resources and provides the logistical support necessary to move any on- or off-island power assets back to their points of origin.
2			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	USACE	When no longer required, emergency generators are uninstalled and transported back to their points of origin. PRTF coordinates on the redeployment of USACE/ESF #3 power assets.
3			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD identifies, assesses, and coordinates with partner agencies any on-island commercial water distribution and transportation assets capable of providing potable water to designated locations pre- and post-impact.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA monitors its overall inventory of needed water supply and distribution materials maintained in the GWA warehouse.
3			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with the Guam Police Department (GPD) to acquire communications/public safety assets to increase overall emergency communications and coordination capabilities.
3			1A	I-72	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA updates its emergency response asset management plan and standard operating procedures (SOP)s, provides a copy of the plan and SOPs to GHS/OCD, and ensures coordination with GHS/OCD on any plan/SOP updates or revisions.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Test and fuel all well generators.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Gain, maintain, and socialize generator serviceability.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Increase water production to fill reservoirs and water towers.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Incident Management Assistance Team (IMAT) conducts initial planning with GHS/OCD.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Regional Response Coordination Center (RRCC) alerts ESF #10 for possible deployment and activates ESF #10 position within the RRCC.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate on the fueling and testing of all designated emergency generators. Non-operational generators are repaired/replaced pre-storm, if possible.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		All generators that are non-operational at the end of Phase 1b are reported to GHS/OCD.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA continues to monitor the overall inventory of needed water supply and distribution materials maintained in the GWA warehouse and shares significant shortfalls with GHS/OCD to inform pre- and post-storm contingency planning.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA connects its main office building with an emergency generator to provide emergency power for its dispatch operations.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA executes its typhoon checklist and SOPs.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA supplements its chlorine supplies at water wells across the island.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA ensures chlorine availability for disinfection of water wells and booster pump sites.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD and ESF #7 to develop contracts with identified commercial potable water storage/transportation, refueling, and emergency power generation assets.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD and ESF #15 for the issuance of public service announcements (PSAs) that encourage pre-storm water storage and provide advice on in-home water storage requirements, capabilities, techniques, and usage.
3			1B	I-48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	FEMA	Place ESF #10 on alert/activate in RRCC.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	FEMA	Coordinate waiver through ESF #10 for wastewater emergency discharge.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Activate the Water and Wastewater Task Force (WWTF).
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF communicates and coordinate fuel priorities with the Fuel Task Force (FTF).
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and the WWTF conduct protective measures to mitigate damage to the North/South Bypass and Kaiser Reservoir.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		IMAT conducts joint planning with the WWTF and reports increases to water production and storage to the RRCC.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		RRCC coordinates an emergency discharge waiver through ESF #10 to relieve pressure on the wastewater system.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and WWTF monitor the overall inventory of needed water supply and distribution materials maintained in the GWA warehouse.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Pre-impact, GWA inventories and safeguards stockpiles of chlorine for the disinfection of water wells and booster pump sites.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and WWTF coordinate with the GPA to start all designated emergency generators at water wells, booster pump sites, and wastewater facilities and disconnect those locations from the main power grid. The GPA reports all non-operational generators to the GWA and GHS/OCD.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF and GPA conduct pre-impact planning for deployment of personnel and equipment at designated staging locations post-impact to conduct damage assessments.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA deploys and installs its non-permanent generators at designated, pre-prioritized locations, including water distribution and water treatment facilities, as needed.

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3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA relocates its dispatch operations to its main office building and coordinates this relocation with GHS/OCD.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA takes protective measures to ensure the availability of chlorine for the disinfection of water wells and booster pump sites post-impact.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and WWTF ensure equipment and trucks required for post-impact assessments are refueled and positioned for post-storm response.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates debris clearance routes and priorities with the Debris Task Force (DTF) to ensure water system assessment and restoration activities can be prioritized post-storm.
3			1C	I-24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD maintains a list of failed generators and coordinates with ESF #3 for replacements.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF coordinates directly with the FTF to ensure generator fuel delivery priorities are communicated and accomplished.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Assess and report status of the North/South bypass and Kaiser Reservoir.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF requests an increase to water production by Naval Facilities Engineering Command (NAVFAC) in response to the Fena Reservoir being taken off line.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD and the WWTF communicate the "boil water" order through public messaging if water contamination dictates.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		IMAT coordinates additional water production by DOD.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		IMAT and ESF #10 assist with the assessment and emergency repair of the N/S bypass and other critical points in the water and wastewater distribution system.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA extends GWA personnel labor shifts to conduct time-critical emergency repairs.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA conducts and WWTF monitors the disinfection of water wells and booster pump sites.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA deploys damage assessment teams made up of GWA engineers. The GWA ensures damage assessment findings are coordinated with the UCG through GHS/OCD and FEMA.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA continues to monitor its overall inventory of needed water supply and distribution materials maintained in the GWA warehouse and coordinates with GHS/OCD, ESF #3, and ESF #7 to source, acquire, and transport the supplies and capabilities needed to restore the water supply and distribution system.

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3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		Based on damage assessments, GWA and GPA coordinate with GHS/OCD, FEMA, ESF #3, and ESF #7 to source, acquire, and transport generators to augment any inoperative generators at critical water wells or booster pump sites.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF coordinates with GHS/OCD, FEMA, and ESF #7 to provide additional security for GWA assets deployed around Guam, as needed. (Additional security may be provided by GUNG, the GPD, and/or contracted private security, as available and needed.)
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF coordinates with ESF #6 and ESF #8 to prioritize water supplies for the hospital and designated emergency shelters, which are pre-established priority locations.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF coordinates with GHS/OCD, ESF #3, and ESF #7 to provide qualified personnel and repair assets to augment GWA capabilities.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF and GHS/OCD coordinate with ESF #3 and ESF #7 to execute established contracts with commercial potable water transportation vendors.



SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF and GHS/OCD, in coordination with the GWA, ESF #3, and FEMA, coordinate on prioritizing the re-establishment of the water supply and distribution system based on the damage assessment results.
3			2A	I+12	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF	FEMA	Purchase additional water from DOD.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF continues to coordinate directly with the FTF to ensure that generator fuel delivery priorities are communicated and accomplished.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF continually assesses and reports status of the North/South Bypass and Kaiser Reservoir.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF monitors water levels as a result of the request to increase water production by NAVFAC in response to the Fena Reservoir being taken off line.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD and WWTF continue to communicate the “boil water” order through public messaging if water contamination dictates.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		IMAT coordinates additional water production by DOD.

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3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and completes and reports assessments of the water supply and distribution system, inventories materials maintained in the GWA warehouse, and coordinates with GHS/OCD, ESF #3, and ESF #7 to source, acquire, and transport the supplies and capabilities needed to restore the water supply and distribution system.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD, FEMA, the JIC, and ESF #15 to maintain a “boil water” order if water contamination dictates.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate with GHS/OCD, FEMA, ESF #3, and ESF #7 to source, acquire, and transport generators to augment any inoperative generators at critical water wells or booster pump sites.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD, FEMA, and ESF #7 to provide additional security for GWA assets deployed around Guam, as needed. (Additional security may be provided by GUNG, the GPD, and/or contracted private security, as available and needed.)
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with ESF #6 and ESF #8 to prioritize water supplies for the hospital and designated emergency shelters, which are pre-established priority locations.

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3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD, ESF #3, and ESF #7 to provide qualified personnel and repair assets to augment GWA capabilities.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GHS/OCD coordinate with ESF #3 and ESF #7 to execute established contracts with commercial potable water transportation vendors.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA monitors the disinfection of water wells and booster pump sites.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GHS/OCD coordinate with ESF #1, ESF #3, and ESF #7 in the maintenance of current contracts with on-island commercial water vendors to provide bottled water and either increase or decrease contracts for bottled water supplies based on damage repair estimates.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD, ESF #1, ESF #3, and ESF #7 monitor current contracts in place for water distribution and either increase or decrease contracts for water distribution operations based on damage repair estimates.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD, ESF #3, and ESF #7 coordinate on the activation and mobilization of GUNG water transportation and storage assets.

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3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD, ESF #3, ESF #7, and FEMA coordinate with the Defense Coordinating Officer (DCO) to mission assign the DOD to provide desalinization units, Reverse Osmosis Water Purification Units (ROWPUs), and water transportation and storage units, as needed.
3			2B	I+24	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD, in coordination with the GWA, ESF #3, and FEMA, coordinates on prioritizing the re-establishment of the water supply and distribution system based on damage assessment results.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF continues to coordinate directly with the FTF to ensure that generator fuel delivery priorities are communicated and accomplished.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF continually assesses and reports status of the North/South Bypass and Kaiser Reservoir.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GHS/OCD and WWTF continue to communicate the “boil water” order through public messaging if water contamination dictates.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		IMAT coordinates additional water production by DOD.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA continues monitoring the operational status of water wells and booster pump sites.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA develops a strategy to replenish the inventory of needed water supply and distribution materials maintained in the GWA warehouse and coordinates with GHS/OCD, ESF #3, and ESF #7 to source, acquire, and transport supplies required for response and recovery actions.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate with GHS/OCD, FEMA, ESF #3, and ESF #7 to de-install and redistribute any temporary generators used to stabilize the water and wastewater system.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD, ESF #3, and ESF #7 to relieve qualified personnel and repair assets that are augmenting GWA assets in the stabilization of the water system.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		When appropriate, GWA alerts GHS/OCD, FEMA, the JIC, and ESF #15 to lift the “boil water” order for all areas.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		When appropriate, GWA alerts GHS/OCD and coordinates with ESF #3 and ESF #7 to terminate contracts with commercial potable water vendors as well as transportation contracts associated with the delivery of potable water.
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		When appropriate, GHS/OCD, ESF #3, and ESF #7 coordinate for the release of GUNG water transportation and storage assets.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			2C	I+36	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		When appropriate, GHS/OCD, ESF #3, ESF #7, and FEMA coordinate with the DCO to de-install and release previously mission-assigned DOD assets such as desalinization units, ROWPUs, and water transportation and storage units, as needed.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF continues to coordinate directly with the FTF ensuring generator fuel delivery priorities are communicated and accomplished as the majority of island power is restored to system locations
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF ensures the proper conditions exist to transition from response to recovery operations.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF reports water and wastewater distribution status and makes recommendations to downgrade response efforts as systems are restored.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		WWTF makes recommendations on the redeployment of ESF #10 and off-island resources as systems are restored.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		UCG conducts demobilization procedures in accordance with the demobilization plan.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA stands down emergency dispatch operations and demobilizes all dispatch personnel and equipment back to their normal duty locations.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate with ESF #3 to return water wells and booster pump sites to the main electrical power grid and terminate use of emergency generators.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate with GHS/OCD, FEMA, ESF #3, ESF #7, GUNG, and DOD to terminate all contracts and MAs for deployed augmentation personnel/assets and return them back to their points of origin.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA and GPA coordinate with GHS/OCD, FEMA, ESF #3, ESF #7, GUNG, and DOD to disconnect, transport, and return all deployed augmentation generators back to their points of origin.
3			3A	I+48	Infrastructure Systems	ESF #3: Public Works and Engineering	IOF		GWA coordinates with GHS/OCD, FEMA, and ESF #15, through the JIC, to issue a "terminate boil water order" PSA when no longer needed.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD develops a Fuel Prioritization Plan (FPP).
4			1A	I-72	logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD develops, validates, maintains, and exercises emergency power generators at critical infrastructure locations.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD designates agencies responsible for the maintenance and functionality of generators installed at critical infrastructure facilities.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD assesses refueling requirements for designated critical facility generators and emergency/disaster response vehicles and establishes and maintains a list of prioritized emergency generator and emergency/disaster response vehicle refueling locations.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD sources temporary fuel storage containers and identifies and prioritizes possible locations for deployment.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD assesses the operational readiness of critical fuel and distribution assets.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with the Guam General Services Agency (Guam GSA) to source and establish contracts for available on-island commercial fuel distribution assets.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD assesses and modifies any existing fuel contracts to ensure a prioritization clause is added to give Territory of Guam facilities and emergency/disaster response assets refueling priority.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD develops a grant request to allow the purchase of, and maintenance for, additional Territory of Guam fuel distribution assets capable of meeting the anticipated demand for sustaining essential services.
4			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, in coordination with neighboring islands, establishes Emergency Management Assistance Compact (EMAC) agreements to augment current Territory of Guam fuel distribution capabilities through mutual aid.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		Activate FTF Request ESF #12.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GovGuam agencies assess and conduct immediate repairs of all temporary power generators at critical facilities.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		FTF produces and socializes the FPP.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		Guam DPW conducts fuel delivery to pre-identified critical infrastructure.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GovGuam agencies receive contracted fuel delivery.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		IMAT conducts joint planning with GHS/OCD and FTF.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		RRCC coordinates support through ESF #12.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	The National Response Coordination Center (NRCC) notifies the Defense Logistics Agency (DLA) of potential fuel requirements and notifies ESF #3, ESF #10, and ESF #12.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	NRCC initiates Transcube purchase and delivery in support of the FTF and fuel delivery operations post-impact.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		U.S. Coast Guard (USCG) District 14 (D14) and the Port Authority of Guam (PAG) contact bulk fuel suppliers to validate on-hand stocks and assess days of supply with the FTF.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD reviews and initiates the FPP and assesses the current availability and operational readiness of the Territory of Guam's fuel supply and distribution assets.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with private vendors and contracts to assess the current availability and operational readiness of fuel supply and distribution augmentation assets.
4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, in coordination with the DCO, establishes the availability and operational readiness of on-island DOD fuel supply and distribution assets.

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4			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD alerts government agencies and private industry of approaching storm and ensures that they are prepared to execute safeguarding procedures to protect on-island fuel storage supplies.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		FTF updates and reports to the response force on the FPP.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		Guam DPW safeguards fuel delivery assets in pre-identified hardened structures to ensure survivability post-impact.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GovGuam agencies receive and report contracted fuel delivery to the FTF.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		IMAT conducts joint planning with GHS/OCD and FTF.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		Federal Staging Area (FSA) receives and issues Transcubes or safeguards pre-impact and prepares to issue to the FTF post-impact.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		FTF validates and monitors the FPP, assesses the current availability and location of on- and off-island distribution capabilities and safeguards these assets prior to impact.

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4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and contract partners coordinate with the RRCC to confirm that the Disaster Local Area Network Incident Status Board is operational so that fuel status can be accessed and updated in real time.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #12 validate that the FPP has been implemented.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and DOD (through the DCO) finalize the availability and operational status of on- and off-island fuel supply and distribution assets.
4			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #15, through the JIC, create and implement PSAs to encourage the populace to fill all fuel tanks prior to impact.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, through the FTF, gains and maintains emergency power generation usage information and develops a fuel utilization report that details fuel consumption.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		All Guam agencies and stakeholders with fuel storage capability as well as those agencies utilizing emergency power generators assess and report status of assets to the FTF for input into the fuel utilization report.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	Salvage dive teams conduct assessments of the fuel docking areas.

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4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	ESF #10 and ESF #12 determine additional storage and distribution capability requirements and coordinate resourcing.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	Additional requirements and capabilities movement coordination executed via MA; coordination with the United States Transportation Command (USTRANSCOM) conducted.
4			2A	I+12	Infrastructure Systems	ESF #7: Logistics	IOF	FEMA	Additional fuel replenishment movement and delivery coordination executed via MA with DLA and USTRANSCOM
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	In coordination with the FTF and PRTF, ESF #12 assists with the establishment of a fuel depot at the alternate port.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		The Governor of Guam mobilizes GUNG fuel assets.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, through the FTF, maintains visibility of emergency generator fuel burn rates at critical infrastructure locations and adjusts fuel delivery schedules as necessary.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #3 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF# 7 establish prioritized commercial fuel stations for the refueling of emergency/disaster response vehicles.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to activate contracts to provide additional commercial fuel assets.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to provide additional neighbor-island commercial fuel supply and distribution assets.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to activate contracts with tug/barge operators to transport fuel supply and distribution assets from neighboring islands to Guam.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #3 identify and deliver additional fuel to emergency generator locations at water wells.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, ESF #1, and ESF #3 maintain the operational readiness of fuel response assets and adjust operations as necessary.
4			2A	I+12	logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #10, and ESF #12 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, through the FTF, maintains visibility of emergency generator fuel burn rates at critical infrastructure locations and adjusts fuel delivery schedules as necessary.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #3 assess post-storm infrastructure damage, fuel supplies, and distribution capabilities and determine fuel prioritization for the response and/or the need to institute fuel rationing.
4			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #15, through the JIC, will create and implement PSAs to outline fuel limitations, institute fuel rationing procedures, and stipulate commercial fueling stations that are available for emergency/disaster response vehicles only.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, through the FTF, gains and maintains emergency power generation usage information and develops a fuel utilization report that details fuel consumption.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, ESF #1, and ESF #3 maintain the operational readiness of fuel response assets and adjust operations as necessary.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	ESF #10 and ESF #12 determine additional storage and distribution capability requirements and coordinate resourcing.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		Additional requirements and capabilities movement coordination executed via MA; coordination with USTRANSCOM conducted.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF	FEMA	Additional fuel replenishment movement and delivery coordination executed via MA with DLA and USTRANSCOM.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD continues to coordinate with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #3 continue to identify and deliver additional fuel to emergency generator locations at water wells.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to provide additional neighbor-island commercial fuel supply and distribution assets.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to activate contracts with tug/barge operators to transport fuel supply and distribution assets from neighboring islands to Guam.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
4			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, ESF #1, and ESF #3 continue to maintain the operational readiness of fuel response assets and adjust operations as necessary.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, through the FTF, gain and maintain emergency power generation usage information and develop a fuel utilization report that details fuel consumption.
4			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #10 and ESF #12 determine storage and distribution capability requirements for Guam are met.
4			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD, ESF #1, and ESF #3 maintain the operational readiness of fuel response assets and adjust operations as necessary.
4			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD continues to coordinate with ESF #7 to assess on-island fuel supplies and provide additional on-island bulk fuel to meet response requirements.
4			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #3 continue to identify and deliver additional fuel to emergency generator locations at water wells.
4			3A	I+48	logistics and Supply Chain Management	ESF #7: Logistics	IOF		The Governor of Guam demobilizes GUNG fuel assets.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		FTF is deactivated.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		UCG conducts demobilization procedures in accordance with the demobilization plan.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD restores normal fuel supply and distribution operations when normal electrical power is restored, debris clearance/removal operations are minimized, and emergency fuel requirements are no longer required.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to terminate contracts with on- and off-island commercial fuel assets.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 to terminate contracts with private bulk fuel vendors.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #7 on terminating contracts with tug/barge operators to transport fuel assets back to their neighbor-island points of origin.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD terminates fuel-rationing operations and ends private fuel station restrictions.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD coordinates with ESF #15, through the JIC, to terminate PSAs stipulating fuel-rationing procedures and private fuel station restrictions and to issue a PSA indicating a return to normal fuel operations.
4			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and FEMA coordinate with the DCO to deactivate DOD fuel assets.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GDOE will coordinate with the American Red Cross for shelter management team training.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD in coordination with GDOE will develop a shelter prioritization plan.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD, Guam DOE, and GPD coordinate a security plan to ensure that the GPD can respond to an incident while emergency shelters are operational.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Coordinate with appropriate local non-governmental organizations (NGOs), including Catholic Social Services, to identify survivor needs and develop a plan to assist access and functional needs/medical needs populations with options for shelter and care in the aftermath of a catastrophic typhoon.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Establish shelter generator fueling requirements and develop a plan for providing generators with fuel post-impact.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Create a prioritized list of alternate shelter sites (hotels, field houses, etc.) for additional general population shelter capacity and access and functional needs/medical needs shelter capacity.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Establish MOUs or contracts with designated shelters/alternate care facilities (ACFs).
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Create and prioritize a list of potential pet shelter sites.

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5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Create and prioritize a list of possible transitional shelter sites (hotels, vacant houses/apartments, soft-sided shelter sites, etc.) and develop MOUs/contracts to utilize these facilities as needed.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Coordinate with FEMA to develop a plan to receive incoming response resources; transport resources from an FSA (if activated), designated shelter locations, and/or designated points of distribution (PODs); and distribute resources to the local population.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DPW is prepared to transport persons seeking shelter from village mayor offices to designated emergency shelters.
5			1A	I-72	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD creates and prioritizes a list of possible transitional shelter sites (hotels, vacant houses/apartments, soft-sided shelter sites, etc.) and develops MOUs/contracts to utilize these facilities as needed.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1B	I-48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD alerts Guam DOE of approaching storm and Guam DOE executes pre-storm checks in accordance with the 2017 sheltering plan. Guam DOE reports operability to GHS/OCD in terms of locations and personnel supporting situational awareness.
5			1B	I-48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #15, through the JIC and in coordination with ESF #6 and ESF #11, develops and broadcasts PSA information on shelter locations (and their status), including those for the general population, individuals with access and functional needs or medical needs, and pets, and the resources/commodities individuals should bring with them to shelters.
5			1B	I-48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Voluntary Organizations Active in Disasters (VOADs) assess on-island inventories, identify potential shortfalls, submit requests to parent agencies for resource delivery, and alert/notify volunteer staff.
5			1B	I-48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DPW ensures that a sufficient number of buses and bus drivers are rostered and available to transport persons seeking shelter from village mayor offices to designated emergency shelter locations, using assigned buses.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD and FEMA establish the Mass Care Task Force (MCTF).
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF receives reports from Guam DOE on shelter operability and coordinates delivery of required resources to bring all locations to 100% operational capacity.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DOE opens emergency shelters.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF reports operability to GHS/OCD of emergency shelter locations open and the number of persons each shelter is supporting pre-impact.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		VOADs identify and coordinate the delivery of off-island resources. If delivery of resources is requested pre-impact, VOADs ensure that they have the proper facilities to protect deliveries from typhoon impacts.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #15, through the JIC and in coordination with ESF #6 and ESF #11, develops and broadcasts PSA information on shelter locations (and their status), including those for the general population, individuals with access and functional needs or medical needs, and pets, and the resources/commodities individuals should bring with them to shelters
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		FEMA and ESF #6 coordinate with ESF #15 to establish procedures for communications with foreign consulates and the tourist population to provide information concerning tourists.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DPW begins transporting persons seeking shelter from village mayor offices to designated emergency shelter locations using assigned buses.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		VOADs assess on-island inventories, identify potential shortfalls, submit requests to parent agencies for resource delivery, and alert/notify volunteer staff.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD ensures that the Guam DOE conducts shelter opening procedures in accordance with the 2013 shelter plan. The procedures include emergency power generation final testing and fuel top-off procedures at all emergency shelter locations.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD coordinates with ESF #15 to inform the public of shelter locations and their status.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD coordinates with ESF #6 to implement the plan developed in Phase 1a to accommodate individuals with access and functional needs and those with medical needs for sheltering.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD coordinates with the Guam DOE, ESF #6, and ESF #11 to activate shelters as needed and initiate reception procedures for the general population and household pets. Service animals will shelter with their owners.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD coordinates with ESF #6 and ESF #7 to execute contracts for additional mass shelter locations as needed (hotel ballrooms, community centers, shopping malls, field houses, etc.).
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD determines availability and maintains accountability of designated POD personnel and alerts POD teams to prepare for possible deployment to POD sites post-impact.
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD coordinates with ESF #7 to alert the DC Guam for possible deployment of select resources to shelter sites.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			1C	I-24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	FEMA coordinates the following Individual Assistance (IA) program support to survivors: (1) financial assistance for home repairs, (2) personal property loss assistance, (3) disaster loans, (4) Disaster-Supplemental Nutrition Assistance Program (D-SNAP) support when requested by the Territory of Guam and in coordination with ESF #11, (5) crisis counseling, (6) disaster unemployment assistance, (7) disaster legal services, (8) support and services to access and functional needs/medical needs populations, and (9) other federal and state agency disaster benefits.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #1 provides reports on the status of, and damage to, the transportation system and infrastructure (e.g., roads and National Airspace System), and other information related to transportation activities and accessibility; provides information on temporary alternative transportation solutions.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF and ESF #6 coordinate mass care and temporary housing support to an estimated displaced population of up to 27,000 people.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	MCTF coordinates the movement of initial federal push of tents, tent kits, and tarps for distribution directly to PODs, as required.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	MCTF gains and maintains situational awareness of displaced populations and conducts joint (federal, territory, private sector, and NGO) damage assessments, including assessments of the functionality of shelters.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Mayor's offices report damage assessments of their facilities and assess ability to provide Tier 2 sheltering.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		VOADs conduct donation management.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		The Red Cross begins case management and direct assistance to survivors.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF coordinates with ESF #8 to provide behavioral health/emotional spiritual support as needed.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF coordinates with ESF #8 to provide triage/first aid at community health centers as needed.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DPW conducts debris clearance operations and ensures that access to emergency shelters is achieved.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DPW recalls bus drivers for transport of persons seeking shelter from shelter locations to village mayors' offices.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Guam DOE conducts closing procedures in accordance with the 2013 shelter plan.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		UCG and ESF #6 coordinate mass care and temporary housing support to an estimated population of over 27,000 people.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD and ESF #6 develop a transitional sheltering strategy.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD and ESF #6 coordinate on-island non-essential GovGuam, Community Emergency Response Team (CERT) and Community Assisted Policing Effort (CAPE), and/or off-island personnel to augment existing shelter staff.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		FEMA Operations and ESF #6 provide for the immediate needs of individuals and families beyond the scope of traditional mass care services (food, water, and shelter), as needed. These activities include but are not limited to the following: (1) reunification of families. (2) registration and tracking of evacuees, and (3) provision of services to access and functional needs/medical needs populations.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	ESF #6 coordinates with ESF #11 and ESF #7 for the delivery of bulk commodities to shelters and staging areas from food wholesalers.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #6 coordinates with ESF #7 for the delivery of response resources to support shelters, PODs, and shelter-in-place populations.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #6 coordinates with ESF #7 on the activation of MOUs and contracts for water distribution to shelters and PODs.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		FEMA Operations and ESF #7 coordinate with the MCOG for the activation of designated PODs.
5			2A	I+12	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #15, through the JIC, develops and broadcasts PSAs to manage expectations and reassure the public regarding mass care and emergency assistance operations.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF coordinates the movement of relief supplies to PODs, and any unfulfilled movement requirements are coordinated through ESF #7.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #7 ensures the continued delivery of emergency relief supplies (to include fuel for generators) to Tier 2 shelters and PODs.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		FEMA and ESF #6 coordinate with ESF #7 to ensure that individuals at ACFs and access and functional needs/medical needs shelter site(s) receive the appropriate commodities, hygiene items, and durable medical equipment (e.g., wheelchairs, scooters, hospital beds, walkers, canes).
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		FEMA and ESF #6, together with ESF #1, ESF #7, and ESF #11, coordinate the delivery of essential supplies (food, water, first aid kits) to isolated populations using a variety of methods (e.g., landing craft, rotary-wing aircraft).

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		Maintain situational awareness.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Collaborate with ESF #11 to provide USDA foods, infant formula, and baby food to supplement FEMA's infant/toddler kits.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Initiate the FEMA Transitional Sheltering Assistance Program and provide other mass care services if needed.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Deploy shelter assessment teams at the request of the territory.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	ESF #7 works with ESF #6 to identify additional mass care resource requirements.
5			2B	I+24	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	ESF #11 provides technical assistance and coordinates with ESF #6 and state agencies on potential needs for USDA foods, infant formula, and baby foods and possible D-SNAP requests.
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF coordinates with the MCOG for the deactivation of designated PODs.
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF confirms or coordinates Guam DOE generators for servicing if required.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #15, through the JIC, develops and broadcasts PSAs to manage expectations and reassure the public regarding mass care and emergency assistance operations.
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		ESF #7 adjusts requirements in providing relief supplies to PODs as they close and backhauls any unused resources for redistribution.
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD confirms all populations that previously received relief supplies no longer have a requirement to receive essential supplies or services.
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		MCTF deactivates when it confirms essential services on Guam are restored to adequate levels of support and mass care services are no longer required.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			2C	I+36	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Coordinate with the RRCC and Joint Field Office (JFO) to open mobile Disaster Recovery Centers (DRCs).
5			3A	I+48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		The UCG coordinates the establishment and opening of a Disaster Recovery Center(s) (DRC)
5			3A	I+48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		UCG implements demobilization procedures in accordance with the demobilization plan.
5			3A	I+48	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF		GHS/OCD, FEMA, and ESF #6 execute the transitional housing strategy.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Federal housing assistance is provided to eligible survivors after a Presidential Major Disaster Declaration through the FEMA IA program and from the Small Business Administration (SBA), U.S. Department of Housing and Urban Development (HUD), USDA-Rural Development, and Veterans Administration (VA).
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Survivors may be eligible for a rental stipend or government-provided temporary housing unit (THU) grants and loans may be awarded toward home repair or home replacement if not covered by insurance. Additionally, direct or financial assistance may be provided toward home construction.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Survivors moving from temporary to permanent housing may be eligible for relocation assistance under the Relocation Assistance Program.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide grants to repair disaster-caused damage not covered by insurance to make the damaged home safe, secure, and functional.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide funds up to the Replacement Program limit for home replacement.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide funds for eligible survivors to rent an alternate place to live or for a THU when rental properties are not available.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide a centralized location for identified available temporary housing resources from the private sector and other federal departments and agencies (e.g., HUD, VA, and USDA properties).
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide financial assistance to individuals and families for rental of temporary accommodations.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide assistance to relocate individuals and families outside of the disaster area, where short- or long-term housing resources are available. Transportation services may include return transportation to the pre-disaster location.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide financial or direct assistance to construct permanent or semi-permanent housing
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide direct housing assistance through THUs on private sites, commercial parks, or other temporary group sites. The direct housing program is activated when the disaster impacts a disproportionate number of dwellings in one or more areas of an affected community and no other housing solutions are available within a reasonable distance from the pre-disaster location. This program involves the provision of THUs that are provided as appropriate to the needs of the community and include units accessible to those with disabilities and others with access and functional needs.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	Provide funding for the repair of multi-family housing for the purpose of housing disaster survivors when there is a shortage of housing resources available and doing so is more cost-effective when compared to providing other forms of temporary housing.
5			TBD	TBD	Mass Care Services	ESF #6: Mass Care, Emergency Assistance, Temporary Housing and Human Services	IOF	FEMA	ESF #1 monitors ground and air traffic and determine potential evacuation routes.
6			1A	I-72	Critical Transportation	ESF #1: Transportation	IOF		Establish Route 11 (the route leading from Route 1 to the seaport) as a priority route for debris clearance.
6			1A	I-72	Critical Transportation	ESF #1: Transportation	IOF		Maintain a list of personnel that possess a Transportation Workers Identity Card (TWIC).
6			1A	I-72	Critical Transportation	ESF #1: Transportation	IOF		Update and maintain response plans as necessary.
6			1A	I-72	Critical Transportation	ESF #1: Transportation	IOF		Review typhoon evacuation plans and maintain constant situational awareness on vessels berthed/moored in the seaport in order to effectively direct an evacuation if necessary.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			1A	I-72	Critical Transportation	ESF #1: Transportation	IOF		Assess HAZMAT requirements, protective measures, and response capabilities in coordination with the Guam Environmental Protection Agency (EPA).
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Maintain situational awareness on all ongoing typhoon preparatory activity activities at the ports.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Coordinate the establishment of the Seaport Unified Command consisting of representatives from the USCG, DOD (U.S. Navy), Port Authority of Guam (PAG), USACE, GHS/OCD, and applicable industry partners.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Execute Typhoon Annex checklist and the <i>Heavy Weather Plan</i> .
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Sortie vessels greater than 200 gross tons out of the seaport.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Initiate evacuation of fleets out of the seaport.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Communicate Broadcast Notices to Mariners (BNTM) to alert incoming shipping vessels of potential seaport closures due to approaching typhoon.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Issue Notices to Airman (NOTAMs) to provide information to commercial airlines and private aviation entities regarding any airport, flight operation, air traffic control, and/or navigational aid (NAVAID) activity due to approaching typhoon.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Initiate harbor patrols to determine the state of readiness and progress of seaport typhoon preparatory activity.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Move any stored hazardous materials from the seaport to approved pre-determined storage site(s) in coordination with PAG.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Decrease the number of stacked shipping containers from five high to three high.
6			1B	I-48	Critical Transportation	ESF #1: Transportation	IOF		Ensure generators and required response assets are-fueled and tested.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Monitor all ongoing typhoon preparatory activity at the ports and coordinate any actions as required/requested.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Direct the closure of the seaport to all non-essential vessel movement and broadcast a BNTM stipulating the seaport closure.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Conduct harbor patrols to establish the state of readiness of the seaport and relay-the information to the Seaport Unified Command and GHS/OCD.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Coordinate with the Federal Aviation Administration (FAA), DOD (Andersen AFB), commercial airlines, and private aviation entities regarding on going preparatory activity and the potential ceasing of airport/flight operations due to the approaching typhoon.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Complete actions to protect critical transportation and cargo movement resources.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Remove small emergency response craft and move to designated shelter locations.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Cease all airport operations, direct support vehicles to be placed in maintenance bays, and direct the retraction and securing of all jetways.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		Coordinate on the issuance of any final NOTAMs regarding the ceasing of airport/flight operations and status of air traffic control radar and/or NAVAIDs.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		PRTF continues to issue BNTM.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		The Harbor Master, in consultation with the Captain of the Port (COTP), begins to sortie vessels greater than 200 gross tons out of the seaport.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF	FEMA	RRCC coordinates the deployment of USCG D14 District Response Advisory Team and Pacific Strike Team (PST) capabilities to Guam in support of the PRTF.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF		The PRTF ensures completion of all pier-side assessments and underwater surveys.
6			1C	I-24	Critical Transportation	ESF #1: Transportation	IOF	USCG	The COTP closes Apra Harbor.

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6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Coordinate and provide oversight on underwater surveys of channels, ship berthing/mooring areas, and harbor in order to identify hazards to navigation and determine port accessibility based on post-storm damage assessments, as needed.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Conduct an assessment of port facilities in order to determine shore-side damage and capabilities.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Conduct a HAZMAT survey of the seaport in order to determine the ability to operate in and around the seaport environment.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD, Guam DPW, the DTF, and PAG coordinate on the clearing of debris from Route 1 and Route 11 to ensure that access to the seaport is available.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Coordinate and provide oversight for the restoration of seaport NAVAIDS, channel markers, etc. and request deployment of the USCG Aids to Navigation team if Coast Guard Cutter Sequoia is unavailable.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Coordinate with PAG and Port Authority police for issuance of temporary TWICs to any augmenting seaport workforce.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Direct the re-opening of the seaport based on the provided operational capability.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Broadcast a BNTM stipulating seaport status and any operational restrictions.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Establish a priority of ships returning to the port, if necessary.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Coordinate on assessments related to airport perimeter security, airport runway and taxiways, air traffic control facilities, airport radar capability, NAVAIDs, and airport support equipment. ESF #1 will support reporting requirements.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division coordinates and directs the clearing of debris from the airport environment (runway, taxiways, aircraft parking areas, etc.).
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Provide tourist information on arriving and departing flight schedules and any special airport procedures.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		In coordination with A.B. Won Pat International Airport Operations Division, Guam Hotel and Restaurant Association (GHRA), commercial airlines, and GHS/OCD, create and broadcast PSAs providing tourist information on airline flight schedules and procedures.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division and FAA coordinate on the resumption of airport and flight operations, as airport operational capability, air traffic control radar, and NAVAID status allows.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD monitors all ongoing port restoration activity and coordinates any necessary actions as required/requested.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		Guam DPW conducts Route 11 bridge assessment (entrance to the port).
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		In the event the Route 11 bridge is temporarily damaged, the PRTF coordinates on a temporary bridging capability to restore access to the port.
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		In the event port access is restricted or destroyed, the PRTF coordinates the resourcing of on-island assets, including 180-ton telescopic cranes, and the establishment of prime power under an existing base operating agreement (BOA).
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		RRCC coordinates additional resources in support of the PRTF pre-impact using field operations funds. Once a Presidential Disaster Declaration is formalized, such assets are mission assigned and funded under the disaster response.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2A	I+12	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Operations Division and FAA coordinate on the issuance of NOTAMs relaying airport and navigational facility status information.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD monitors all ongoing port restoration activity and coordinates any necessary actions as required/requested.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The Seaport Unified Command coordinates and provides oversight on underwater surveys of channels, ship berthing/mooring areas, and the harbor in order to identify hazards to navigation and determine port accessibility based on post-storm damage assessments.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The USCG and PAG conduct an assessment of port facilities to determine shore-side damage and capabilities.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		Guam DPW conducts Route 11 bridge assessment (entrance to the port).
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		In the event the Route 11 bridge is temporarily damaged, the PRTF coordinates on a temporary bridging capability to restore access to the port.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		In the event port access is restricted or destroyed, the PRTF coordinates the resourcing of on-island assets, including 180-ton telescopic cranes, and the establishment of prime power under existing MOAs.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		RRCC coordinates additional resources in support of the PRTF pre-impact using field operations fund funds. Once a Presidential Disaster Declaration is formalized, these assets are mission assigned and funded under the disaster response.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The COTP directs the reopening of the seaport based on operational capability.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The USCG and PAG conduct a HAZMAT survey of the seaport to determine the ability to operate in and around the seaport environment.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division coordinates and directs the clearing of debris from the airport environment (runway, taxiways, aircraft parking areas, etc.).
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The Tourist Planning Task Force provides tourist information on arriving/departing flight schedules and any special airport procedures.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD, Guam DPW, the DTF, and PAG coordinate on the clearing of debris from Route 1 and Route 11 to ensure that access to the seaport is available.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD, PAG, and the Port Authority police coordinate with the Transportation Security Administration (TSA) for issuance of temporary TWICs to any augmenting seaport workforce personnel.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The USCG coordinates and provides oversight for the restoration of seaport NAVAIDs, channel markers, etc., and requests deployment of the USCG Aids to Navigation Team if CGC Sequoia is unavailable.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The USCG broadcasts a BNTM stipulating seaport status and any operational restrictions.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The Seaport Unified Command, through the Maritime Transportation System Recovery Unit (MTRSU), establishes a priority for ships returning to the port.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division and FAA coordinate on assessments of airport perimeter security, airport runways and taxiways, air traffic control facilities, airport radar capability, NAVAIDs, and airport support equipment; ESF #1 supports reporting requirements.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division and FAA coordinate on the resumption of airport and flight operations, as airport operational capability, air traffic control radar, and NAVAID status allows.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Operations Division and FAA coordinate on the issuance of NOTAMs relaying airport and navigational facility status information.
6			2B	I+24	Critical Transportation	ESF #1: Transportation	IOF	FEMA	Establish a fuel depot.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD monitors all ongoing port restoration activity and coordinates any necessary actions as required/requested.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		As port throughput capabilities and power are restored, cargo handling operations transition from the alternate port back to Apra Harbor.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		As port throughput capabilities and power are restored, the PRTF coordinates the release and return of on-island assets supporting the alternate port.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		RRCC coordinates the release of additional resources used in support of the PRTF pre-impact as port capabilities are restored.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		The COTP directs the reopening of the seaport based on operational capability.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		The USCG and PAG conduct a HAZMAT survey of the seaport to determine the ability to operate in and around the seaport environment.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		The PRTF and Guam DPW coordinate debris removal from Route 11 to ensure access to the seaport.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		GHS/OCD, PAG, and the Port Authority police coordinate with the TSA for issuance of temporary TWICs to any augmenting seaport workforce personnel.
6			2C	I+36	Critical Transportation	ESF #1: Transportation	IOF		USCG will broadcast a BNTM stipulating seaport status and any operational restrictions.
6			3A	I+48	Critical Transportation	ESF #1: Transportation	IOF		UCG conducts demobilization procedures in accordance with the demobilization plan.
6			3A	I+48	Critical Transportation	ESF #1: Transportation	IOF		The Seaport Unified Command, GHS/OCD, DOD (U.S. Navy), and FEMA, in coordination with ESF #1, continue to take actions and coordinate any support required to ensure the operation, long-term recovery, and continued viability of the seaport.
6			3A	I+48	Critical Transportation	ESF #1: Transportation	IOF		The A.B. Won Pat International Airport Operations Division, FAA, GHS/OCD, and FEMA, in coordination with ESF #1, continue to take actions and coordinate any support required to ensure the operation, long-term recovery, and continued viability of the airport.
6			3A	I+48	Critical Transportation	ESF #1: Transportation	IOF		The PRTF is deactivated with the announcement of resumption of normal operations at Apra Harbor.
6									

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD/FEMA Logistics, in coordination with GHS/OCD partner agencies, assess commodity supply requirements for supporting populations affected by the typhoon as well as immediate response resource (IRR) needs for conducting response and recovery operations.
7			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD/FEMA Logistics and GHS/OCD/GSA coordinate with partner agencies and private vendors to source available on-island commodity supplies and IRR and to identify and prioritize possible locations for distribution and deployment.
7			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD/FEMA Logistics, in coordination with GHS/OCD/GSA, source and establish contracts with private vendors for available on-island commercial commodity supplies and IRR as well as distribution assets. Contracts must be de-conflicted to minimize resource competition.
7			1A	I-72	logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD/FEMA Logistics, in coordination with GHS/OCD/GSA, assess and modify any existing commodity supply/IRR resource or distribution contracts to ensure a clause is added to prioritize GHS/OCD and emergency/disaster response operations

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			1A	I-72	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD/FEMA Logistics, in coordination with other GHS/OCD partner agencies, maintain awareness of any established EMAC agreement to augment current GHS/OCD commodity supplies/IRR or distribution capabilities.
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and partner agencies, continues to assess on- and off-island public and private commodity supplies and IRR as well as distribution and storage capabilities.
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7 initiates and coordinates preparatory commodity and IRR distribution and storage activities to ensure the conduct of effective response and recovery operations and the continuation of essential services for the population of Guam.
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD, private vendors, and EMAC partners, establishes awareness on the current availability and operational readiness of on- and off-island public and private commodity supplies, IRR, and storage and distribution assets that can augment existing capabilities.
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and the DCO, establishes awareness on the availability and operational readiness of on-island DOD supply and resource distribution and storage assets.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, attempts to establish “first priority” use of private vendor distribution and storage assets for commodities and IRR post-impact.
7			1B	I-48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7 verifies that the FSA location(s) on Guam is available for activation and capable of providing secure storage as well as loading capabilities for further distribution of commodities by truck to PODs and other identified locations.
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD ensures transportation and distribution asset protection measures are taken to ensure asset survivability once the typhoon strikes.
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD, FEMA Operations, GHS/OCD partner agencies, private vendors, EMAC partners, and the DOD (through the DCO), finalizes the availability and operational status of on- and off-island public and private commodity supplies/IRR as well as distribution and storage capabilities.
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7 confirms that the FSA location(s) on Guam is activated on a limited basis to ensure that sufficient assets are staged and the appropriate number of personnel are able to staff the FSA post-impact.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and FEMA Operations ensure that the FSA(s) on Guam is(are) stocked with an initial 96-hour supply of commodities to enable 4 days of distribution of emergency supplies to roughly 8,000 citizens per day.
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and FEMA ensure that sufficient storage exists to safeguard resources at the FSA(s) during a Category 5 typhoon.
7			1C	I-24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD confirms that the POD location(s) in each village is prepared to activate post-impact and the appropriate number of personnel are able to staff the POD once activated.
7			2A	I+12	Critical Transportation	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs required.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG confirm that the FSA location(s) on Guam is resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs activated post-impact and anticipate differing commodity demands at each POD based on damage assessments.
7			2A	I+12	logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD confirms that the POD location(s) identified in each village remains suitable post-impact.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD ensures that activated PODs submit and validate 48-hour needs forecasts on a daily basis.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, establishes awareness of any mobilized GUNG or mission-assigned DOD distribution assets and integrates them into the overall distribution and storage effort.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		As needed, ESF #7, in coordination with GHS/OCD and FEMA Operations, executes contracts with private vendors to augment existing capabilities with commercial commodities, IRR, and distribution assets.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, establishes awareness of any EMAC agreement executed with a neighboring island for additional commodity supplies, IRR, and distribution assets/capabilities.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, as directed by GHS/OCD and FEMA Operations, sources and contracts for additional neighbor-island commodity supplies, IRR, and distribution assets/capabilities.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, as directed by GHS/OCD and FEMA Operations, sources and contracts with private on-island commodity vendors for additional commodity supplies, IRR, and distribution assets to meet commodity and response resource requirements.
7			2A	I+12	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD, FEMA Operations, and other GHS/OCD agencies, maintains awareness of the operational readiness of potential on- or off-island commodity supplies, IRR, and distribution assets to augment existing capabilities if response requirements exceed initial capabilities.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs required.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG monitor FSA activities to ensure that the FSA remains resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 gain and maintain situational awareness regarding the number of PODs in operation and anticipate differing commodity demands at each POD based on damage assessments.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD confirms that the POD location(s) in each village remains viable for supporting the daily number of survivors and distribution equipment
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD ensures that activated PODs submit and validate 48-hour needs forecasts on a daily basis.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, maintains awareness of all mobilized GUNG or mission-assigned DOD distribution assets supporting the response.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, maintains awareness of contracts with private vendors augmenting existing capabilities with commercial resources in support of the response.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, as directed by GHS/OCD and FEMA Operations, maintains awareness of neighbor-island distribution resources supporting the response.
7			2B	I+24	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7 and GHS/OCD maintain visibility of all off-island and contract assets performing distribution missions and prepare to release assets as demand decreases.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs required.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG ensure that the FSA(s) remains stocked with a pre-impact quantity of commodities to allow for distribution to 8,000 affected citizens per day for 4 days.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and the UCG confirm the FSA location(s) on Guam is resourced with sufficient equipment and personnel to meet the demands of receiving, storing, and issuing enough commodities to distribute to 8,000 affected citizens per day for 4 days.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs in operation and anticipate differing commodity demands at each POD based on damage assessments.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD ensures that PODs remaining open continue to submit and validate 48-hour needs forecasts on a daily basis.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		GHS/OCD and ESF #7 maintain situational awareness regarding the number of PODs being deactivated as private industry recovers.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		As required, ESF #7, in coordination with GHS/OCD and FEMA Operations, ends contracts with private vendors providing support to distribution operations.
7			2C	I+36	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		As required, ESF #7 and GHS/OCD release off-island and contract assets performing distribution missions as demand decreases.
7			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD, FEMA Operations, and other GHS/OCD partner agencies, maintains awareness regarding the transition from emergency commodities distribution operations to steady-state commercial supply chain operations and adjusts logistics support actions as necessary
7			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, maintains awareness regarding the demobilization of all GUNG and DOD commodities distribution support assets as well as the termination of related DOD MAs and adjusts operations accordingly

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
7			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, in coordination with GHS/OCD and FEMA Operations, maintains awareness regarding the deactivation of EMACs for neighbor-island commodity supply and distribution assets and IRR.
7			3A	I+48	Logistics and Supply Chain Management	ESF #7: Logistics	IOF		ESF #7, directed by GHS/OCD and FEMA Operations, terminates contracts for on- and off-island public and private emergency commodity supply and distribution assets and IRR.
7									
			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Each Department, Division and Section Head shall maintain a specific <i>Tropical Cyclone Response Plan</i> that can be implemented at the appropriate time. Personnel shall be thoroughly oriented and familiar with their plan.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Each Department, Division and Section Head will review, revise, and approve their specific <i>Tropical Cyclone Response Plan</i> on an annual basis.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	All recall lists will be updated as necessary. department, division and section heads will provide a copy of their recall lists to the Human Resources Department.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD coordinates with other territorial agencies and private organizations to identify viable hardened facilities to serve as shelters for incident management teams and medical teams, and their assets, prior to impact.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD identifies possible locations to be utilized as ACFs.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD develops and maintains a list of hardened facilities that can be used to shelter emergency personnel and assets arriving from Hawaii and CONUS.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Ensure responder health protection guidance is current and readily available.
8			1A	I-72	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Maintain deployment ready status of ESF #8 response personnel.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads will initiate the implementation of their response plans.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads shall complete their <i>Tropical Cyclone Response Plan</i> Checklist and submit them to the Modified Command Post.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads will prepare to report the status of departmental operations and responsibilities during the meeting convened by the Hospital Administrator.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator will convene a meeting with all departments, divisions, and section heads within 1-2 hours of the Condition of Readiness (COR) Level 3 setting.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator will instruct the Communications Center and Information Technology departments to set up the Command Post in the board room.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator will instruct the Public Information Officer (PIO) to prepare the necessary press releases and radio announcements for distribution.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	A report on the status of essential supplies and equipment shall be made, identifying urgently needed supplies and equipment and authorizing the replacement or replenishment of those not in stock or at low supply levels.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator will initiate steps for securing the facility and preparing the hospital.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator will direct Facilities Maintenance staff to begin securing shutters.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads will notify their personnel of their assignments.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH employees shall stay tuned to the radio for information and instructions. All Guam Memorial Hospital Authority (GMHA) employees are considered essential employees.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads will determine the staffing levels for both the hospital and Skilled Nursing Unit and who will be assigned to the two facilities. All others may return home and remain available.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH employees shall stay tuned to the radio for information and instructions. All GMHA employees are considered essential employees.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	FEMA deploys an IMAT team.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	HHS alerts/activates the Hawaii Disaster Medical Assistance Team (DMAT), Incident Support Team (IST), and Incident Response Coordination Team (IRCT).
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Activate and deploy ESF #8 to the RRCC.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Activate and deploy ESF #8. Three Regional Emergency Coordinators (RECs) to deploy with FEMA IMAT.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Deploy IRCT-Advanced (IRCT-A) cache from California to Guam.
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Deploy very small aperture terminal (VSAT) capability.

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1B	I-48	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #15, through the JIC, disseminates PSAs, informing Guam residents and tourists about emergency procedures.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	FEMA executes select Pre-scripted Mission Assignments.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator shall meet with Hospital Command Post general staff and the command staff to discuss GMHA's preparation.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator may choose to place the hospital and Skilled Nursing Unit on complete "lock down" if necessary to ensure everyone's safety.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	The PIO will issue a public notice advising of the "lock down" status.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Hospital Administrator shall convene a meeting to receive verbal reports on problems encountered and receive status reports on post-cyclone activities

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Vulnerable populations surge to hospitals for care in COR 2.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Surge/augment hospital staff.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD coordinates transportation and shelter for pre-positioned teams and assets.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH transfers non-critical patients to skilled nursing facilities (SNFs) (or releases them) to create capacity.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD coordinates with ESF #7 on the notification of the GDOE to facilitate the provision of hardened facilities for sheltering response teams, include the Hawaii DMAT, IST, and IRCT.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD and ESF #8 verify availability of Humanitarian Assistance Rapid Response Team (HARRT) personnel to assist at ACFs, as needed.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH and ESF #8 coordinate with GHS/OCD to alert and coordinate with Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) to determine availability of resources and deploy ESAR-VHP personnel to ACFs as needed.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 deploys an IST and an IRCT to a hardened facility in Guam prior to typhoon impact.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 deploys a Hawaii DMAT to a hardened facility in Guam prior to typhoon impact.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 deploys a CONUS DMAT to Hawaii to stand by for deployment to Guam.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 alerts CONUS DMATs and coordinates deployment of a Federal Medical Station (FMS).

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #11 provides animal medical services and support to household pets/service animals in designated shelters.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	IMAT deployed to Guam.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Deploy DMAT to Guam with cache.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Deploy two HHS Medical Task Forces to support northern and southern community health clinics.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Transport IRCT-A cache from Sacramento to Guam.
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Activate and deploy two LRAT (Hawaii/Guam).

SECTION	Status	Task #	Phase	I -/+ x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			1C	I-24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Transport two Mobile Lifesaving Kits to Guam.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Once COR IV is announced, the PIO will issue a public notice advising employees to report for duty as scheduled
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Department, division, and section heads conduct a meeting with their respective staffs to assess performance and identify any specific damages during the storm within 48 hours after return to COR 4.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 assesses requirements for Behavioral Health Team resources.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 determines requirement to activate pharmaceutical cache.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 determines requirement for Mobile Lifesaving Kit augmentation.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 employ pushed resources to provide surge/augmentation capability to Guam.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Vulnerable populations leave hospitals.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	As appropriate, the GMH transfers non-critical patients to SNFs or releases patients to return to their homes post-impact to preserve capacity.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH coordinates with the DOD (U.S. Navy) to recall any available Naval Hospital-Guam and GMH medical staff to create a medical surge capability immediately following the storm.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GMH and ESF #8 utilize the ESAR-VHP to activate regional medical personnel for deployment, as required.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 coordinates with ESF #6 to provide medical support to shelters upon request.



SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 deploys alerted DMATs and the FMS, as needed.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Based on initial assessments post-impact, ESF #8 alerts and deploys additional medical needs shelter teams; additional medical staff; and veterinary, surgical, radiological, and dialysis support, as needed.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Based on initial assessments post-impact, ESF #8 increases casualty care space through the use of DMATs, the FMS, and/or additional ACFs for patients requiring acute medical treatment and 24-hour care, as needed.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 assesses and initiates resource procurement of additional medical supplies and pharmacological support.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Based on initial assessments post-impact, ESF #8 deploys the National Veterinary Response Team (NVRT) to provide medical services and support to pets/service animals in designated shelters.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Based on initial assessments post-impact, ESF #11 deploys pet care supplies from the National Veterinary Supply cache.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #15, through the JIC, disseminates PSAs to residents and visitors regarding ongoing and planned medical response activities.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	The DOD, through the DCO, provides support to response and medical teams as mission assigned and as defined in the NRF Annex or through inter-agency agreements. This effort may include rotary- and fixed-wing support.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD coordinates with ESF #8 to request a Disaster Mortuary Operational Response Team and mortuary support assets, as needed.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 determine requirements to activate pharmaceutical cache.
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 determines requirements for Mobile Lifesaving Kit augmentation.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2A	I+12	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 employs pushed resources to provide surge/augmentation capability to Guam.
8			2B	I+24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Guam medical facilities discharge non-critical patients from hospitals and SNFs to restore capacity.
8			2B	I+24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	Guam public health and medical systems/facilities return to pre-storm staffing levels.
8			2B	I+24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	GHS/OCD coordinates with ESF #7 and ESF #13 to demobilize additional security personnel providing protection at healthcare facilities.
8			2B	I+24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 prepares to redeploy DMATs and the FMS; deployed medical needs shelter teams; additional medical staff; and veterinary, surgical, radiological, and dialysis support as needs decrease.
8			2B	I+24	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #15, through the JIC, disseminates PSAs to residents and visitors regarding ongoing and planned medical response activities.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #8 redeploys all federal surge resources from Guam back to their home stations.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG demobilizes DMAT(s), the IST, and the IRCT.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG demobilizes any regional medical personnel deployed for the medical response.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG demobilizes and redeploys the FMS(s) back to its place of origin.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG coordinates the return to medical facilities of any patients and patient support personnel that were evacuated from Guam pre-impact.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG coordinates with ESF #6 to close ACFs/medical needs shelters.

SECTION	Status	Task #	Phase	I +/- x hours (Initiated)	Core Capability	ESF/RSF	Responsible Team	Lead Agency	Task
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG coordinates with ESF #8 to re-establish normal medical care activities for medical needs patients at GMH and the U.S. Naval Hospital-Guam.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG stands down security personnel at ACF(s)/medical needs shelter(s).
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	UCG conducts demobilization procedures in accordance with the demobilization plan.
8			2C	I+36	Public Health, Healthcare, and Emergency Medical Services	ESF #8: Public Health and Medical Services	IOF	HHS	ESF #15, through the JIC, disseminates PSAs to residents and tourists regarding the standing down of all ACFs.

## Appendix Y: Acronyms

Acronyms	
AAR	After-Action Report
ACF	Alternate Care Facility
ADA	Americans with Disabilities Act
ADHMT	Air-Deployable Hazardous Material Response
AE	Aeromedical Evacuation
AFB	Air Force Base
APOD	Airport of Debarkation
APOE	Airport of Embarkation
APPA	American Public Power Association
ARES	Amateur Radio Emergency Services
ARFF	Aircraft Rescue and Firefighting
BGAN	Broadband Global Area Network
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BNTM	Broadcast Notice to Mariners
CAPE	Community Assisted Policy Effort
CBRN	Chemical, Biological, Radiological, and Nuclear
CEMP	Comprehensive Emergency Management Plan
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CHC	Community Health Center
CID	Critical Incident Division
CIR	Critical Information Requirements
CMAT	Consequence Management Advisory Team
CNMI	Commonwealth of Northern Mariana Islands
COML	Communications Unit Leader
COML	Communications Unit Leader
CONUS	Continental United States
COR	Condition of Readiness
COTP	Captain of Port
CPG	Comprehensive Preparedness Guide
DC	Distribution Center
DCO	Defense Coordinating Office/
DCE	Defense Coordinating Element
DEC	Disaster Emergency Communications
DEGS	Disaster Emergency Group Supervisor
DHS	Department of Homeland Security
DLA	Defense Logistics Agency
DMAT	Disaster Medical Assistance Team
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior

<b>Acronyms</b>	
<b>DOJ</b>	U.S. Department of Justice
<b>DOS</b>	U.S. Department of State
<b>DOT</b>	U.S. Department of Transportation
<b>DPHSS</b>	Department of Public Health and Social Services
<b>DPW</b>	Department of Public Works
<b>DRC</b>	Disaster Recovery Center
<b>DRF</b>	Disaster Relief Fund
<b>D-SNAP</b>	Disaster Supplemental Nutrition Assistance Program
<b>DSA</b>	Disaster Survivor Assistance
<b>DTF</b>	Debris Task Force
<b>EA</b>	External Affairs
<b>EAS</b>	Emergency Alert System
<b>ECIE</b>	Executive Council on Integration and Efficiency
<b>EEI</b>	Essential Elements of Information
<b>EMAC</b>	Emergency Management Assistance Compact
<b>EMS</b>	Emergency Medical Services
<b>EOC</b>	Emergency Operations Center
<b>EPA</b>	Environmental Protection Agency
<b>ERT</b>	Emergency Response Team
<b>ESAR-VHP</b>	Emergency system for advance registration of volunteer health professionals
<b>ESF</b>	Emergency Support Function
<b>FAA</b>	Federal Aviation Administration
<b>FCC</b>	Federal Communications Commission
<b>FCO</b>	Federal Coordinating Officer
<b>FDRC</b>	Federal Disaster Recovery Coordinator
<b>FEMA</b>	Federal Emergency Management Agency
<b>FIOP</b>	Federal Interagency Operational Plan
<b>FLEO</b>	Federal Law Enforcement Officer
<b>FMS</b>	Federal Medical Station
<b>FOPM</b>	FEMA Operational Planning Manual
<b>FOSC</b>	Federal on scene coordinator
<b>FPP</b>	Fuel Prioritization Plan
<b>FPS</b>	Federal Protective Services
<b>FRMAC</b>	Federal Radiological and Monitoring Center
<b>FSA</b>	Federal Staging Area
<b>FSM</b>	Federated States of Micronesia
<b>FTF</b>	Fuel Task Force
<b>GDOE</b>	Guam Department of Education
<b>GEO</b>	Guam Energy Office
<b>GGPSCS</b>	Guam Homeland Security Public Safety Communications System (GGPSCS)
<b>GHRA</b>	Guam Hotel and Restaurant Association
<b>GHS</b>	Guam Homeland Security
<b>GHS/OCD</b>	Guam Homeland Security Office of Civil Defense
<b>GIAA</b>	Guam International Airport Authority

<b>Acronyms</b>	
<b>GIS</b>	Geographic Information Systems
<b>GMH</b>	Guam Memorial Hospital
<b>GovGuam</b>	Government of Guam
<b>GPA</b>	Guam Power Authority
<b>GPD</b>	Guam Police Department
<b>GRMC</b>	Guam Regional Medical Center
<b>GSA</b>	General Services Administration
<b>GST</b>	Gulf Stream Team
<b>Guam DPW</b>	Guam Department of Public Works
<b>Guam EPA</b>	Guam Environmental Protection Agency
<b>Guam GSA</b>	Guam General Services Agency
<b>GUNG</b>	Guam National Guard
<b>GWA</b>	Guam Waterworks Authority
<b>HARRT</b>	Humanitarian Assistance Rapid Response Team
<b>HAZMAT</b>	hazardous materials
<b>HDR</b>	Humanitarian Daily Ration
<b>HETA</b>	Homeland Environmental Threat Analysis
<b>HF</b>	High Frequency
<b>HHS</b>	United States Department of Health & Human Services
<b>HQ</b>	Headquarters
<b>HSD</b>	Homeland Security Division
<b>HSPD</b>	Homeland Security Presidential Directive
<b>IA</b>	Individual Assistance
<b>IAA</b>	Inter-Agency Agreement
<b>IAP</b>	Incident Action Plan
<b>ICP</b>	Information Collection Plan
<b>ICS</b>	Incident Command System
<b>IG</b>	Inspector General
<b>IMAT</b>	Incident Management Assistance Team
<b>IMT</b>	Incident Management Team
<b>IOF</b>	Initial Operating Facility
<b>IPP</b>	Independent Power Producers
<b>IRAT</b>	
<b>IRCT</b>	Incident Response Coordination Team
<b>IRCT-A</b>	Incident Response Coordination Team-Advance
<b>IRR</b>	Initial Response Resources
<b>ISB</b>	Incident Support Base
<b>IST</b>	Incident Support Team
<b>JFO</b>	Joint Field Office
<b>JIC</b>	Joint Information Center
<b>JIS</b>	Joint Information System
<b>JRM</b>	Joint Region Marianas
<b>JTWC</b>	Joint Typhoon Warning Center
<b>LMD</b>	Logistics Management Directorate
<b>LMR</b>	Land-Mobile Radio
<b>LNO</b>	Liaison Officer



<b>Acronyms</b>	
<b>LRAT</b>	Logistics Response Assistance Team
<b>MA</b>	Mission Assignment
<b>MAC</b>	Multi-Agency Coordination
<b>MACC</b>	Multi-Agency Coordination Center
<b>MARAD</b>	U.S. Marine Administration
<b>MCG</b>	Movement Control Group
<b>MCOG</b>	Mayors' Council of Guam
<b>MCTF</b>	Mass Care Task Force
<b>MRE</b>	Meal-Ready-to-Eat
<b>MERS</b>	Mobile Emergency Response Support
<b>MOA</b>	Memorandum of Agreement
<b>MOU</b>	Memorandum of Understanding
<b>MTF</b>	Medical Task Force
<b>MTS</b>	Marine Transportation System
<b>MTSRU</b>	Maritime Transportation System Recovery Unit
<b>NARAC</b>	National Atmospheric Release Advisory Center
<b>NASA</b>	National Aeronautics and Space Administration
<b>NAVFAC</b>	Naval Facilities Engineering Command
<b>NBIC</b>	National Biosurveillance Integration Center
<b>NBIS</b>	National Biosurveillance Integration System
<b>NCP</b>	National Contingency Plan
<b>NEIC</b>	National Enforcement Investigation Center
<b>NEST</b>	Nuclear Emergency Support Team
<b>NFIP</b>	National Flood Insurance Program
<b>NGO</b>	nongovernmental organization
<b>NOTAM</b>	Notice to Airman
<b>NIMS</b>	National Incident Management System
<b>NNSA</b>	National Nuclear Security Administration
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NPG</b>	National Preparedness Goal
<b>NPS</b>	National Park Service
<b>NRCC</b>	National Response Coordination Center
<b>NRCS</b>	National Response Coordination Staff
<b>NRF</b>	National Response Framework
<b>NSF</b>	National Strike Force
<b>NRT</b>	National Response Team
<b>NVRT</b>	National Veterinary Response Team
<b>NWS</b>	National Weather Service
<b>OCONUS</b>	outside the continental United States
<b>OHA</b>	Office of Health Affairs
<b>OSC</b>	On-scene Coordinator
<b>PAG</b>	Port Authority of Guam
<b>PCIE</b>	President's Council on Integrity and Efficiency
<b>PDA</b>	Preliminary Damage Assessment
<b>PIAT</b>	Public Information Assistance Team
<b>PIO</b>	Public Information Officer

<b>Acronyms</b>	
<b>POC</b>	point of contact
<b>POD</b>	Point of Distribution
<b>Port TF</b>	Port Task Force
<b>PPA</b>	Pacific Power Association
<b>PPD</b>	Presidential Policy Directive
<b>PRT</b>	Planning and Response Team
<b>PRTF</b>	Power Restoration Task Force
<b>PSA</b>	Public Service Announcement
<b>PSAP</b>	Public Safety Answering Point
<b>PSCC</b>	Power System Control Center
<b>PSS</b>	Planning Support Section
<b>PST</b>	Pacific Strike Team
<b>PRTF</b>	Power Restoration Task Force
<b>PWHC</b>	Port Heavy Weather Condition
<b>RA</b>	Regional Administrator
<b>RACES</b>	Radio Amateur Civil Emergency Service
<b>RAP</b>	Radiological Assistance Program
<b>REC</b>	Regional Emergency Coordinator
<b>Red Cross</b>	American Red Cross
<b>RMI</b>	Republic of the Marshall Islands
<b>ROWPU</b>	Reverse Osmosis Water Purification System
<b>RRCC</b>	Regional Response Coordination Center
<b>RRCS</b>	Regional Response Coordination Staff
<b>RRP</b>	Regional Response Plan
<b>RSF</b>	Recovery Support Function
<b>RSP</b>	Regional Support Plan
<b>SAR</b>	Search and Rescue
<b>SME</b>	Subject Matter Expert
<b>SNF</b>	Skilled Nursing Facility
<b>SOP</b>	Standard Operating Procedure
<b>SSA</b>	Social Security Administration
<b>TCC</b>	Tactical Communications Center
<b>TCO</b>	Territory Coordinating Officer
<b>TCU</b>	Tropical Cyclone Update
<b>TF</b>	Task Force
<b>THIRA</b>	Threat Hazard Identification & Risk Assessment
<b>THU</b>	Temporary Housing Unit
<b>TSA</b>	Transportation Safety Administration
<b>TWIC</b>	Transportation Worker Identity Card
<b>UCG</b>	Unified Coordination Group
<b>UCS</b>	Unified Coordination Staff
<b>UHF</b>	Ultra High Frequency
<b>USACE</b>	U.S. Army Corps of Engineers
<b>USAF</b>	U.S. Air Force
<b>US&amp;R</b>	Urban Search & Rescue
<b>USCG</b>	U.S. Coast Guard

<b>Acronyms</b>	
<b>USDA</b>	U.S. Department of Agriculture
<b>USGS</b>	United States Geological Survey
<b>USMS</b>	U.S. Marshals Service
<b>USN</b>	U.S. Navy
<b>USNH</b>	U.S. Naval Hospital
<b>USPS</b>	United States Post Office
<b>US TRANSCOM</b>	U.S. Transportation Command
<b>VA</b>	Veterans Administration
<b>VAL</b>	Voluntary Agency Liaison
<b>VHF</b>	Very High Frequency
<b>VOAD</b>	Voluntary Organization Active in Disasters
<b>VSAT</b>	Very Small Aperture Terminal
<b>VTC</b>	Video Teleconference
<b>WFO Guam</b>	Weather Field Office Guam
<b>WMD</b>	Weapon of Mass Destruction
<b>WWTF</b>	Water and Wastewater Task Force

## Appendix Z: Distribution

### 1 Purpose

Distribution of the plan to the following entities:

- Senior Leadership Steering Committee
- Guam Homeland Security Office of Civil Defense (GHS/OCD)
- FEMA Region IX
- FEMA Region IX Pacific Area Office
- FEMA Region IX Guam Defense Coordinating Officer/Element (DCO/DCE)
- Federal Emergency Support Function (ESF) Region IX coordinators
- FEMA Headquarters
- Nongovernmental organizations (NGOs) and private sector partners

A complete copy of the plan consists of the *2018 Guam Catastrophic Typhoon Annex* and includes the Base Plan, Appendices A, B (with 1 tab and 1 appendix), C (with 12 appendices), D, E, F, X, Y, and Z.

### 2 Distribution Table

Entity	Email
SLSC	
GHS/OCD	Distribution List
FEMA Region IX	Distribution List
FEMA Region IX Pacific Area Office	Distribution List
Guam DCO/DCE	Distribution List
ESF Region IX Coordinators	Distribution List
FEMA Headquarters	Distribution List
NGOs and Private Sector Partners	Distribution List

Email version – PDF version of plan

