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**FEDERAL CONTRACT PLANNING IN SUPPORT OF
CONUS DISASTER RESPONSE: AN ANALYSIS AND
APPLICATION OF DOD CONTINGENCY TOOLS IN THE
PRECONTRACT-AWARD ENVIRONMENT**

December 2018

**By: Stephen C. Lawson
James O. Cashwell**

**Advisor: E. Cory Yoder
Co-Advisor: Aruna U. Apte**

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RESPONSE: AN ANALYSIS AND APPLICATION OF DOD CONTINGENCY
TOOLS IN THE PRECONTRACT-AWARD ENVIRONMENT**

Stephen C. Lawson, Major, United States Army
James O. Cashwell, Captain, United States Air Force

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Approved by: E. Cory Yoder
Advisor

Aruna U. Apte
Co-Advisor

Rene G. Rendon
Academic Associate, Graduate School of Business and Public Policy

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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	After Action Report
ARMYNORTH	Army North
BOA	Basic Ordering Agreements
BPA	Blanket Purchase Agreement
CCDR	Combatant Commander
COCOM	Combatant Command
COIN	Counterinsurgency
CONPLAN	Concept plan
CONUS	Continental United States
CRS	Congressional Research Service
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DFAR	Defense Federal Acquisition Regulation
DHS	Department of Homeland Security
DLA	Defense Logistics Agency
DoD	Department of Defense
DoDD	Department of Defense Directive
DOTmLPF-P	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities-Policy
DRF	Disaster Relief Fund
DSCA	Defense Support to Civil Authorities
DUNS	Data Universal Numbering System
EFT	Electronic Funds Transfer
FAR	Federal Acquisition Regulation
FBO	Federal business opportunities
FEMA	Federal Emergency Management Agency
FPDSNG	Federal Procurement Data System-Next Generation
GAO	U.S. Government Accountability Office
GCC	Geographic Combatant Command
GSA	General Services Administration

HCA	Head of Contracting Activity
HNS	Host-Nation Support
HSAR	Homeland Security Acquisition Regulation
IDIQ	Indefinite Delivery Indefinite Quantity
IPE	Integrated Planner and Executor
JCS	Joint Chiefs of Staff
JFC	Joint Force Command
JP	Joint Publication
KO	Contracting Officer
LPTA	Lowest Price Technically Acceptable
MA	Mission Assignment
MAC	Mission Assignment Coordinator
MBA	Master of Business Administration
MBDA	Minority Business Development Agency
MOOTW	Military Options other than War
NPS	Naval Postgraduate School
NRF	National Response Framework
NRP	National Response Plan
OCONUS	Outside the Continental United States
OCS	Operation Contract Support
OPLAN	Operations Plan
PAO	Public Affairs officer
PCO	Procurement Contracting Officer
PKEMRA	Post Katrina Emergency Management Reform Act
PSC	Private Security Contractors
PTAP	Procurement Technical Assistance
PZCO	Phase Zero Contracting Operations
ROMO	Range of Military Options
SAM	System for Award Management
SBA	U.S. Small Business Administration
SFCLM	Stella's Future Contracts and Logistics Model
SSA	Source Selection Authority

STAFFORD ACT	The Robert T. Stafford Disaster Relief and Emergency Assistance Act
USACE	United States Army Corps of Engineers
USNORTHCOM	United States Northern Command
YTTM	Yoder Three-tier Model

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I. INTRODUCTION

A. BACKGROUND

Natural disasters such as hurricanes, wildfires, and tornados occur seasonally whereas earthquakes, volcanic eruptions, and other events are unpredictable. These natural events impact millions of citizens nationwide. It is the responsibility of local and state municipalities to prepare, launch, and coordinate the response effort after such an event occurs. As the population of the United States continues to grow along the coasts and major metropolitan areas, local resources can easily become overwhelmed requiring federal assistance. The National Response Framework (NRF) provides coordinating roles and responsibilities to respond to such a crisis while the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) provides an avenue for federal resources to become available to both citizens and the local governments who need them. The Department of Homeland Security (DHS) has designated the Federal Emergency Management Agency (FEMA) as the lead federal agency responsible for planning and response. FEMA has pre-positioned stocks of life support commodities located throughout its six (6) regions to support local requirements as they become overwhelmed. However, the federal government does not have enough resources to sustain operations over the long term, therefore a reliance on contracting vehicles and relationships within the business community are paramount. All too often media reports on the inefficiencies within response operations that result in supplies and resources not getting to those who need them the most.

The Department of Defense (DoD) has a key role in the NRF for coordinating and logistics support through both Title 10 and Title 32 resources. Each DoD service component has contracting professionals, who if leveraged appropriately, could assist in ensuring the proper planning and execution of disaster response operations occurs. If provided with the proper tools and resources triggered in the event of a response, the DoD could be leveraged as a valuable asset. The activities that occur in Phase Zero lead to success or failure during subsequent planning and operational phases. United States Northern Command (USNORTHCOM) is responsible for Defense Support of Civilian

Authority (DSCA) operations and U.S. Army North (ARMYNORTH) is responsible for ground response operations within the continental United States (CONUS). It is critical for us to understand what resources and capabilities are available throughout the entire federal government that can be leveraged before a disaster occurs to ensure the safety of life, property, and recovery.

B. SCOPE OF THIS PROJECT

The purpose of this Master of Business Administration (MBA) Project is to examine the role of FEMA's disaster planning, preparation, and operations within the CONUS environment and within existing frameworks. This project intends to analyze how the DoD's capabilities may increase the efficiency planning and response operations through a coordinated effort between local, state, and federal authorities. It intends to explore the response within authorities described in the Stafford Act and within Federal Acquisition Regulation (FAR) protocols. We conducted our research based on utilization of the Yoder Three-Tier Model (YTTM), specifically as it pertains to Phase Zero Contract Operations (PZCO) and looked at ways these protocols could be incorporated into FEMA disaster planning and response operations to improve contract award effectiveness. We believe that this would ensure the proper commodities and services are provided during the most critical timeframes to preserve life and minimize property loss.

We contend that there is a problem in the planning and preparation by executive agencies prior to disaster response occurring in CONUS environments. Time and time again, it appears that federal agencies find themselves playing catch-up once a crisis occurs and subsequently rush through the contracting process, potentially omitting critical verification and evaluation steps prior to contract award. Once a vendor is awarded a contract, there have been instances where the contractors are unable to perform the needed services or deliver the appropriate supplies, costing the agency excess money and wasting valuable time. More importantly this results in not getting critical supplies where they are needed, when they are needed, during the most critical times.

Throughout our research we sought to identify why, during a crisis, contractors are awarded federal contracts when they do not have the capacity nor capability to fulfill the

requirements. Additionally, why have they received an award when they should have been disqualified. We sought to find a reasonable solution to assist the federal response and save lives and property while responding better and faster while being good stewards of taxpayer dollars.

C. RESEARCH QUESTIONS

The primary and secondary research questions were designed to address the challenges and requirements of contracting operations in preparation for a CONUS disaster. The questions were developed to examine the underlying issue; no matter which FEMA Region is impacted. Furthermore, they were developed to discover possible contracting solutions to make the federal response more effective and efficient while coordinating with local, state, and private entities. Our secondary research questions are closely related to the federal protocols in place that may be leading to the inefficient or ineffective response from federal agencies.

Primary Research Question:

1. What, if any contract inefficiencies exist within the CONUS disaster relief environment? If so, how can they be improved and or eliminated?

Secondary Research Questions:

1. Does the theoretical concept of the National Response Framework enable an efficient response to CONUS natural disasters and are the requisite contracting tools available to support it?
2. What is the current construct of the National Response Framework and how does it support and inhibit contracting response to CONUS natural disasters?
3. Is there a DoD contracting framework that can be applied to improve any inefficiencies and improve rapid response to preserve life and property?

D. RESEARCH METHODOLOGIES

1. Introduction

In this section we describe the methods used for investigating and answering our research questions. Specifically, we examine our process of gathering information and conducting our literature review, how we established and maintained compliance with the Naval Postgraduate School (NPS) Institutional Review Board (IRB), which federal organizations we sought information from and the challenges this presented. Finally, we discuss DoD models utilized too present our findings and make our recommendation.

2. Literature Review

We conducted a thorough and broad literature review to gain understanding on how the federal government prepares for and responds to natural disasters in the CONUS environment. This process enabled us to further our knowledge on the local, state, and federal coordination events, executive agency relationships, statutory language, and other leading documents to aid our research. We utilized Lawrence Machi and Brenda McEvoy's model outlined in *The Literature Review*. The book defines a literature review "as a written argument that supports a thesis position by building a case from credible evidence obtained from previous research" (Machi & McEvoy, 2016, p. 5). We conducted open source data base research to discover an extensive amount of scholarly articles, after action reports (AARs), Congressional Research Services (CRS) papers and Government Accountability Office (GAO) investigations stemming from the poor disaster response of Hurricane Katrina. Furthermore, we looked extensively at U.S. Army and Joint Doctrine to gain a full understanding of Operational Contract Support (OCS) and DSCA activities.

In order to guide our process, we utilized the Machi and McEvoy's Literature Process as described in Figure 1. This model helped to focus our efforts on relative data that would lead us to determine solutions to our primary and secondary research questions while staying on track during the review process.

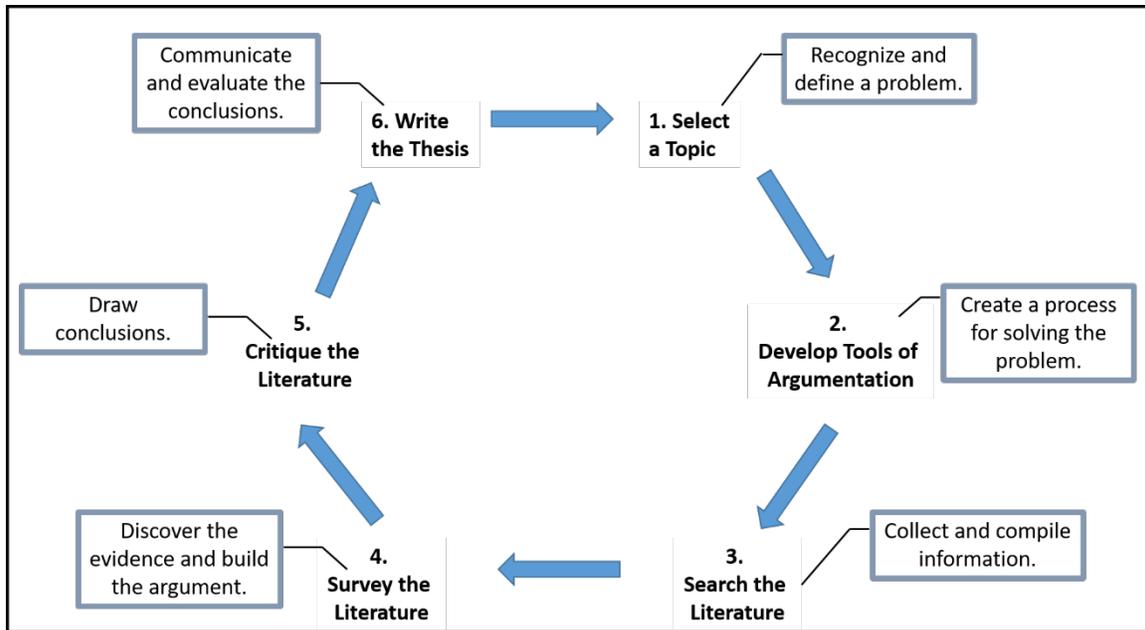


Figure 1. The Literature Review Model. Adapted from Machi and McEvoy (2016).

3. Interview Process and IRB

We quickly realized during our research that data base searches and investigative reports were necessary, but did not always paint the whole picture. We determined that we needed to interview subject matter experts within FEMA who were knowledgeable on the processes and procedures of disaster response planning and execution. In compliance with the IRB guidelines, we ensured that our interviews were voluntary and conducted in accordance with NPS IRB compliance guidance. We provided pre-vetted written questions and received written and verbal responses through a telephonic interview.

4. Challenges

It was extremely difficult to conduct interviews and gain firsthand accounts of disaster and relief planning operations at the federal level. We attempted to contact numerous FEMA Regions through their public affairs officers (PAO) but were unable to receive support. We were forced to rely on official GAO investigations, AARs, and data from FPDSNG for our conclusions and recommendations.

5. Analytical Processes

This project utilized standard research methodologies to conduct qualitative analysis of processes associated with acquisition planning prior to crisis events occurring. Through the analysis of disaster response planning, contracting operations, and logistical requirements, we sought to identify inefficient processes that may cause critical supplies to not arrive when they are most needed. We conducted our research with publicly sourced unclassified information to examine lessons learned from real disasters and contingency type events. We attempted to interview senior DoD acquisition officials for first-hand experience from operations and lessons learned. Additionally, we sought to interview and research professionals associated with FEMA, specifically, regarding disaster response and contracting operations in the wake of CONUS natural disasters. In order to analyze our findings, we utilized the YTTM and the Pillars of Success to determine what may be improved in the planning phases to prevent unsatisfactory performance. Upon completion of our analysis, we examined the planning and response to Hurricane Katrina and the 2017 hurricane seasons comprised of Hurricanes Harvey, Irma, and Maria. With this information, we were able to develop our final recommendations and recommendations for future research.

E. ORGANIZATION OF REPORT

This report is organized into five chapters. In Chapter I, we provide the overarching direction, structure, and scope of our research. Chapter II provides the context and understanding of what a disaster is, the statutory language and frameworks that drive the federal government's planning and response, and finally we conclude Chapter II with the context and overview required for an understanding of how the federal government executes contract planning and operations in normal circumstances and disaster response circumstances. Chapter III focuses on the explanation and application of the YTTM and Pillars of Success in conjunction with OCS within the DoD's planning and execution. We conduct case studies from the Hurricane Katrina and the 2017 hurricane season focused on contracting issues and the federal government's response. Chapter IV examines how the benefits of applying the YTTM and Pillars of Success from the DoD's OCS protocols may

improve contract planning and execution efficiency within FEMA. Finally, in Chapter V, we provide our recommendation and present opportunities for further research.

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II. LITERATURE REVIEW

In this chapter we provide the background and provide an understanding on the planning, execution, and response to a disaster or crisis within CONUS, at the federal level. This is explored through the examination of published research, government investigative reports, operations AARs, as well as open source information to provide a clear understanding of how the federal government plans, coordinates, and participates in disaster and crisis contracting operations. First, in a broad view, we define what a disaster is and what support is traditionally required regardless of the type. Second, we present the key concepts and authorities provided by the Stafford Act. Third, we examine the current frameworks in place to enable local jurisdictions to prepare and respond as required. Fourth, we examine the DoD's role in disaster assistance and finally, we explore the traditional versus emergency contracting processes, authorities, procedures, and vehicles established to enable local and federal officials to provide resources and relief.

A. INTRODUCTION

In this section we level the playing field and attempt to define what a disaster is and the basic requirements needed in the aftermath. We then provide a current snapshot of the disaster environment by examining the number of disaster and declarations signed by the President of the United States between Hurricane Katrina in 2005 through August 2018. Finally, we examine the broad resource requirements and challenges presented in an unplanned crisis, to respond and recover.

1. What is a Disaster?

The definition of a disaster is open to many different interpretations and there are over 40 different definitions depending on who one talks to and what time of day it is (Kelman, 2017). What is known is that a disaster can be natural (hurricane, flood, earthquake, etc) or manmade (oil spill, nuclear reactor meltdown, water crisis, etc) and directly effects individuals, property, health, and safety. Disasters affect those that are closest to the point of origin most adversely, while its secondary effects may be felt through environmental or market conditions very far from the origin all for an enduring period.

Additionally, recovery from a disaster can overwhelm local resources quickly requiring higher echelon assistance.

FEMA training materials on Theory, Principles and Fundamentals of Hazards, Disasters, and U.S. Emergency Management outlines different definitions revolving around central themes (Federal Emergency Management Agency [FEMA], n.d.-b)

A disaster is defined in the Stafford Act as:

Major Disaster: Any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought) or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Stafford Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. (The Robert T. Stafford Disaster Relief and Emergency Assistance Act [Stafford Act], 1988)

However, the United Nations defines it as:

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. (UISDR, 2017)

Furthermore, scholars such as Professor Stephen A. Nelson (2018) of Tulane University explains:

A natural hazard is a threat of a naturally occurring event will have a negative effect on humans. This negative effect is what we call a natural disaster. In other words when the hazardous threat actually happens and harms humans, we call the event a natural disaster.

Responding to a natural or manmade disaster may be costly, resource intensive, and very risky. However, it is known that however one defines a disaster, it disrupts daily life, personnel, property, and puts at risk health and safety. Planning for any disaster is an all hands effort from the local emergency management agencies, through the state, and ultimately the federal government. Proper planning saves lives, property, and resources and is an imperative function throughout the coordination and planning process.

When a disaster such as a hurricane is heading for a U.S. state or locale, time is of the essence. The first 72 hours after a disaster are the most critical due to the probable loss of life support and infrastructure resources. The planning that occurs leading up to impact and impact plus 72 hours may well determine life and death, loss of property, or determine the need to repair or replace critical infrastructure. It is believed that first responders have 72 hours to conduct rescue operations before transitioning to a search.

For the purpose of this project, we acknowledge the roles and responsibilities of local and state agencies, however we are focusing on the federal planning and response, specifically among the DoD and the DHS. We will examine the federal contract planning prior to a natural disaster occurring under the FEMA's explanation of disasters.

Ilan Kelman's (2017) disaster definition document explains that FEMA describes the following characteristics as consistent with all federally declared disasters:

creates demands that exceed the normal capacities of any one organization or government; crosses jurisdictional boundaries; changes the number and structure of responding organizations; and creates new tasks and engages participants who are not ordinarily disaster responders.

2. The CONUS Disaster Environment

Since Hurricane Katrina impacted the southern coast of New Orleans in August 2005, there have been in excess of 1,017 Stafford Act Declarations made by the president of the United States comprised of 815 Major and 202 Emergency Declarations (FEMA, 2018b). This data represents the number of times in the past 13 years that local and state authorities were overwhelmed by natural or manmade disasters, requiring federal resource assistance. This number represents individual incidents that were impacted from floods, hurricanes, wildfires, draughts among others. If one was to look at the individual number of localities affected, the number would be in excess 22,000 declarations and millions of citizens in the past 13 years. Disasters will continue to occur and may impact more individuals, life, and property as citizens continue to relocate to coastal areas as well as the continued effects and unknowns of climate change. Disaster planning, mitigation, and response begins at the local level and takes a coordinated effort to produce lasting effects.

3. Resource Requirements and Challenges to Response

Disaster response is unpredictable. Preparing for and responding to disasters presents enormous challenges depending on location, scope, and time. The best plan for response is impacted with variables beyond the control of local or federal authorities. FEMA has established a series of distribution centers throughout CONUS as depicted in Figure 2. These distribution centers cater to commodities that are required for response operations.

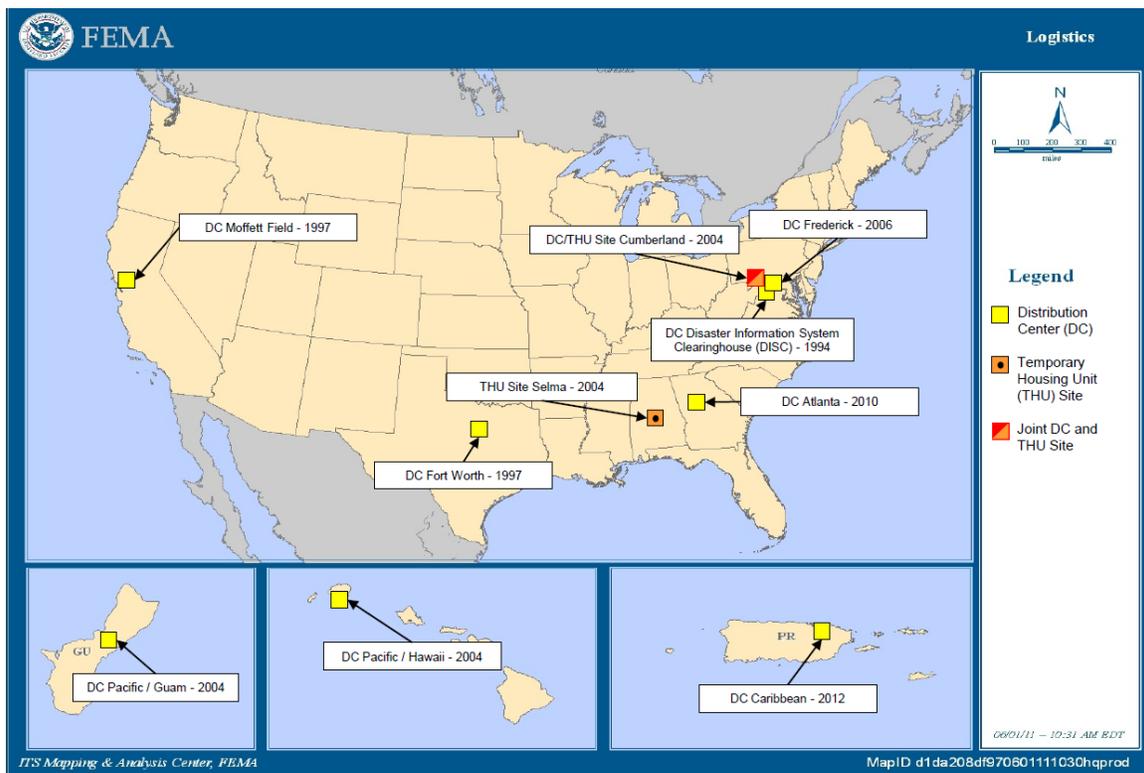


Figure 2. FEMA Distribution Center Map. Source: Tucker (2018).

The supply chain and management of logistics have always been an important factor in humanitarian aid [or disaster relief] operations because logistics efforts account for 80 percent of disaster relief (Trunick, 2005). FEMA’s distribution centers are located near population and resources enabling a proper and coordinated response. The speed of aid after a disaster depends “on the ability of logisticians to procure, transport, and arrive

to the site” (Thomas, 2003) where they are needed. FEMA’s distribution centers are only the tip of relief. Although commodities may be staged and readily available, transporting them to where they are needed poses additional hurdles, requiring coordination between local, state, federal, and non-governmental organizations to assist in the distribution to the end user. Besides receiving, transporting, and distributing resources, it is common for effected area to be in environments where infrastructure is destabilized due to the disaster. This can include a lack of electricity and networks which further hamper the coordination and communication efforts for response.

Proper logistics planning, support, and execution is paramount for ensuring efficient disaster response and emergency management. We see various definitions and applications of logistics across the spectrum of organizational environments and business sectors. The DoD for example may place priority on sustaining essential military operations and ensuring the proper integration between strategic and tactical logistics channels in order to equip the warfighter at the unit level with needed resources (Apte, 2009, p. 19). In the traditional business environment, we see logistics as those activities related to material management, service information and capital flows (Apte, 2009, pp. 6–7) with a focus on managing the product value chain between suppliers and customers. Additionally, from a humanitarian relief and response perspective, logistics is viewed as “the process of planning, implementing, and controlling the efficient, cost-effective, flow and storage of goods and materials, as well as related information, from point of origin to point of consumption for the purpose of meeting the end beneficiary’s requirements” (Thomas, 2005). While there are common fundamental characteristics that exist across the various logistics applications, there are unique challenges and complexities that are specific to each as well.

We view humanitarian logistics operations and activities as those necessary to deliver critical food, supplies and various other relief requirements to victims of disaster and/or major emergencies. Humanitarian logistics share key features of other logistics activities, which are primarily concerned with the efficient shipping and receiving of goods via private or commercial carriers. However, principle differences are related to the end beneficiaries and stakeholders which shift the focus to timely and effective response and

recovery efforts in order to minimizing casualties and deliver essential relief and restoration activities (Rao, 2017). Additionally, humanitarian logistics provide unique challenges associated with demand unpredictability and volatility, short lead time, wide array of supply requirements as well as a general lack of resources to include supplies, people, technology transportation and financial resources (Kovacs & Spens, 2009, p. 2). The time element becomes increasingly exacerbated in disaster response efforts given the lack of warning prior to event occurrence (Apte, 2009, p. 16). However, through data collection and analysis as well as proper planning and mitigation efforts based on geographic vulnerability and susceptibility conditions, humanitarian logistics can deliver robust response and recovery activities for those in need (Apte, 2009, p. 15).

Suitable planning combined with the strategic utilization of humanitarian logistics operations can play a key role in providing critical aid to those affected by disasters and major emergency situations. Humanitarian logistics are largely specialized and tailored to disasters ranging from earthquakes and hurricanes to famine and terrorists' attacks (Kovacs & Spens, 2009, pp. 2–4). There is vast application potential for critical humanitarian logistics across the spectrum of CONUS disaster relief and response activities. It is vital that executive agencies working in concert to deliver critical goods and services to those in need prioritize humanitarian logistics as a means of achieving synergies in support of inevitable future disasters and emergencies affecting our nation.

In the immediate aftermath of a natural disaster it is imperative to restore vital life support functions as quickly as possible. Authorities must ensure that food, water, and shelter is available for the population affected. These commodities are coordinated through FEMA's prepositioned stock and distribution centers in cooperation with local authorities and not-for-profit (i.e., Red Cross) entities. In a densely populated area where hundreds of thousands of citizens are affected, the resources and distribution of commodities is a multi-layer supply chain that connects relief supplies, distribution centers, and victims together (Haghani & Oh, 1996). Furthermore, the ability to resource and fulfill the requirements is paramount to the distribution process. Locales utilize their prepositioned stocks until they are overwhelmed. At the federal level, FEMA works with federal partners such as the DoD

for transportation and commodity stock, however, this is only a short term solution. FEMA establishes contracts with companies to fulfill the requirements.

Natural disasters are unpredictable and provide very little warning to facilitate preparation. A locality may have less than a week to prepare for a hurricane but the actual impact is not fully realized until long after the hurricane makes land fall. Tornados and earthquakes occur with no warning. However, within CONUS, it is generally known where these different types of events will occur, enabling local and federal responders to stage commodities that would be required in the aftermath of any event.

4. Conclusion to Disaster Review

In this section we defined what a disaster is for this project and the sheer quantity of times that local resources have been overwhelmed post Hurricane Katrina. We concluded this section with evaluating necessary support requirements and how the local, state, and federal authorities work together and coordinate the resources required while dealing with the challenges presented. Improving the process of getting the resources to those needing them most when they need them is the backbone of this project.

B. BACKGROUND OF FEDERAL DISASTER RESPONSE OPERATIONS

1. Introduction

The federal government, when requested by local authorities, is capable of providing resources to assist disaster planning and response. The overarching goal is to ensure that the proper resources are distributed to the proper people at the proper time. When local resources are overwhelmed and authorities request assistance, there are a number of actions the federal government can take. In this section we examine how the frameworks are utilized throughout the federal government to meet local needs. These frameworks include the Stafford Act, the NRF, and the essential support functions that provide guidance and direction to detail the entirety of the executive branch's participation. Finally, we examine the DoD 's support of response efforts and how their joint planning processes are applied to planning and execution, when required.

2. The Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. §§ 5121–5206, was enacted in 1988 “to support State and local governments and their citizens when disasters overwhelm them” (FEMA, n.d-a) and “establish a process for requesting and obtaining a presidential disaster declaration, defines the type and scope of assistance available from the federal government, and sets conditions for obtaining that assistance” (FEMA, n.d.-a). FEMA is a subordinate agency to DHS and is charged with coordinating the federal government’s response to any action taken under the Stafford Act.

As outlined in Figure 3, disaster and crisis response begins at the local level, closest to the crisis. Local authorities utilize their resources to protect life and property, while setting conditions to minimize losses. Once the local resources become overwhelmed, local authorities request assistance from the next higher authority, and so on until all of the State’s resources are overwhelmed. When all local resources are exhausted, the state’s governor requests a formal presidential declaration; this sets in motion federal assistance and resources coordinated by FEMA.

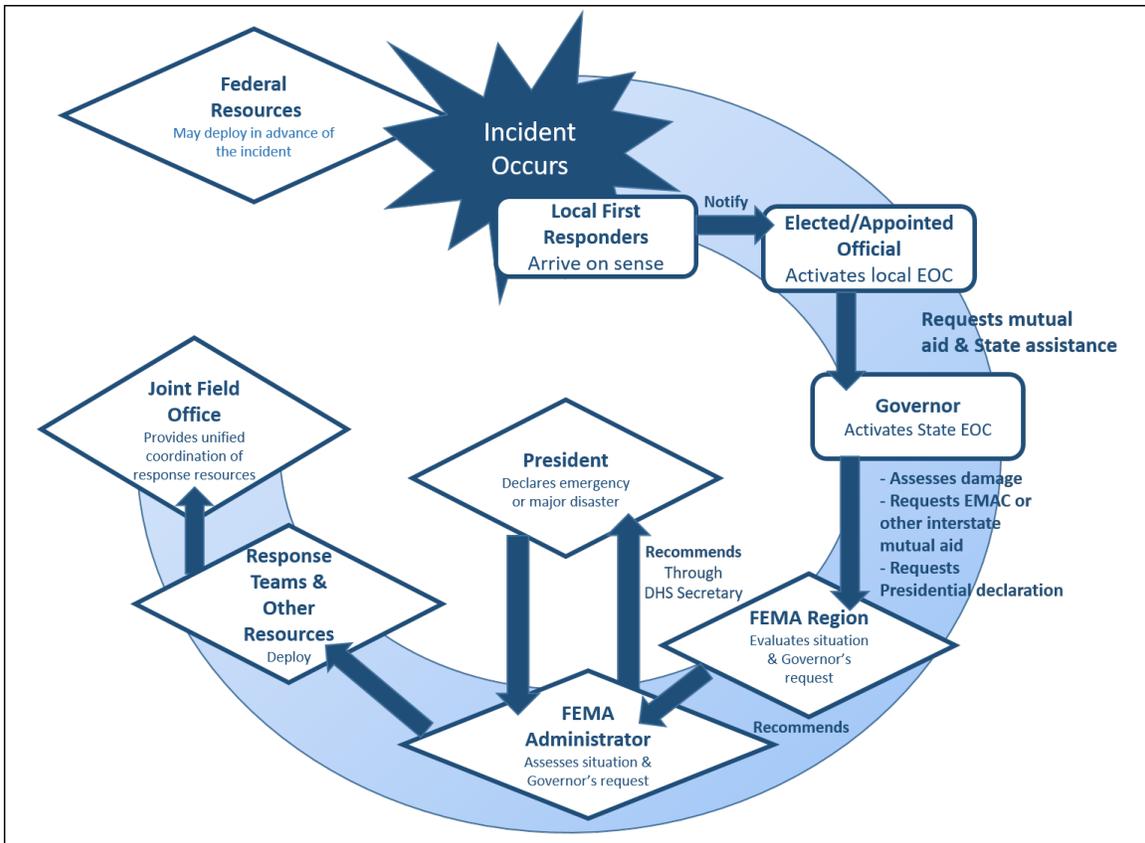


Figure 3. Overview of Stafford Act Support to States. Adapted from FEMA (2016b).

Section 401 of the Stafford Act (1988) explains how a declaration is declared:

IN GENERAL – All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State. Such a request shall be based on a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that Federal assistance is necessary. As part of such request, and as a prerequisite to major disaster assistance under this Act, the Governor shall take appropriate response action under State law and direct execution of the State’s emergency plan. The Governor shall furnish information on the nature and amount of State and local resources which have been or will be committed to alleviating the results of the disaster, and shall certify that, for the current disaster, State and local government obligations and expenditures (of which State commitments must be a significant proportion) will comply with all applicable cost-sharing requirements of this Act. Based on the request of a Governor under this section, the President may declare under this Act that a major disaster or emergency exists.

Once the state or local Governor has formally requested a presidential declaration in response to a major disaster via the applicable regional FEMA office, the process begins to take shape. In coordination with state emergency personnel, federal officials conduct a preliminary damage assessment (PDA) in order to estimate the extent to which the disaster has impacted public infrastructure, facilities, and resources as well as individuals (FEMA, n.d.-c). The PDA communicates to federal authorities that the severity and magnitude of required emergency response is outside of the capacities and capabilities of the local government. It is typically embedded within the governor's initial request for federal intervention, though can be submitted after the fact when the situation is reasonably assured to be deemed catastrophic and federal assistance is imminent. The request also includes relevant information pertaining to the amount of, and extent to, which local resources will be committed in response to the disaster, and a monetary approximation of the amount due to the severity of damage (FEMA, n.d.-c, p. 1).

Furthermore, it is the responsibility of a governor to certify that local government funds allocation and obligations comply with pre-existing cost sharing requirements of which significant burden rests on the affected state. Figure 4 outlines this flow process. In response to the formal request the president has the authority to determine that a major emergency or disaster is underway, subsequently authorizing a myriad of federal programs and funding channels designed to supplement and assist in any ongoing or initial response and recovery efforts (FEMA, n.d.-c).

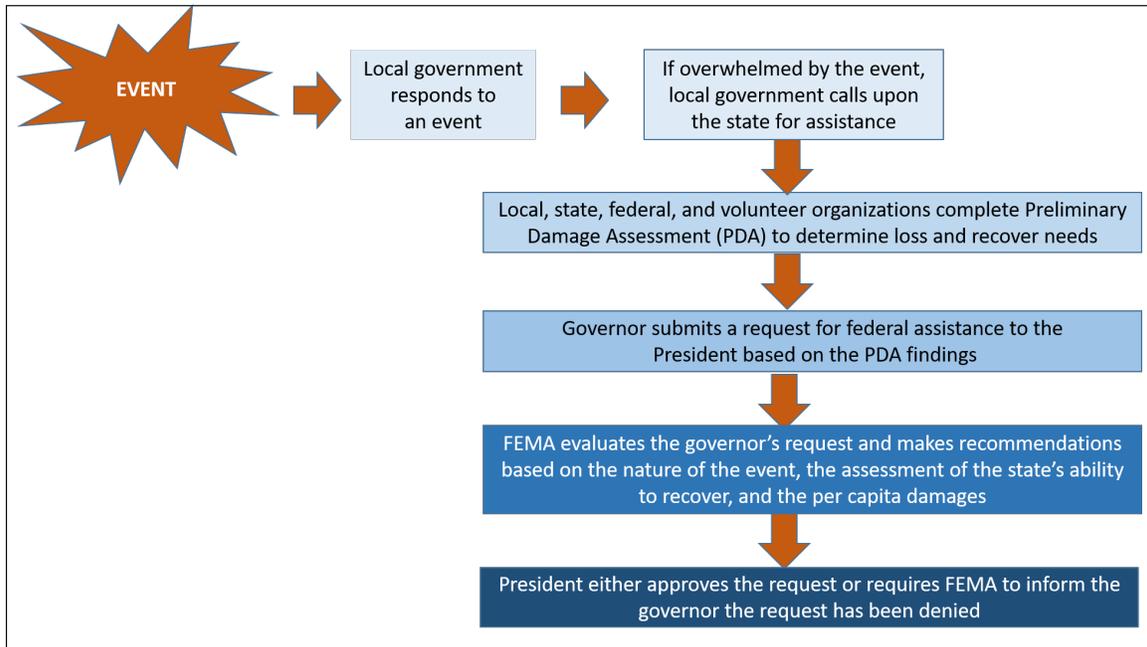


Figure 4. FEMA Declaration Process Flow. Source: Lindsay (2014).

The Stafford Act provides the president with two main options for declarations depending on severity of the event: Emergency Declarations and Major Disaster Declarations as depicted in Figure 5. Each follows the same request procedures. However, an Emergency Declaration is smaller in size and scope of the federal resources available when compared to a Major Disaster Declaration. An Emergency Declaration can be transitioned into a Major Disaster at a later time if a situation requires.

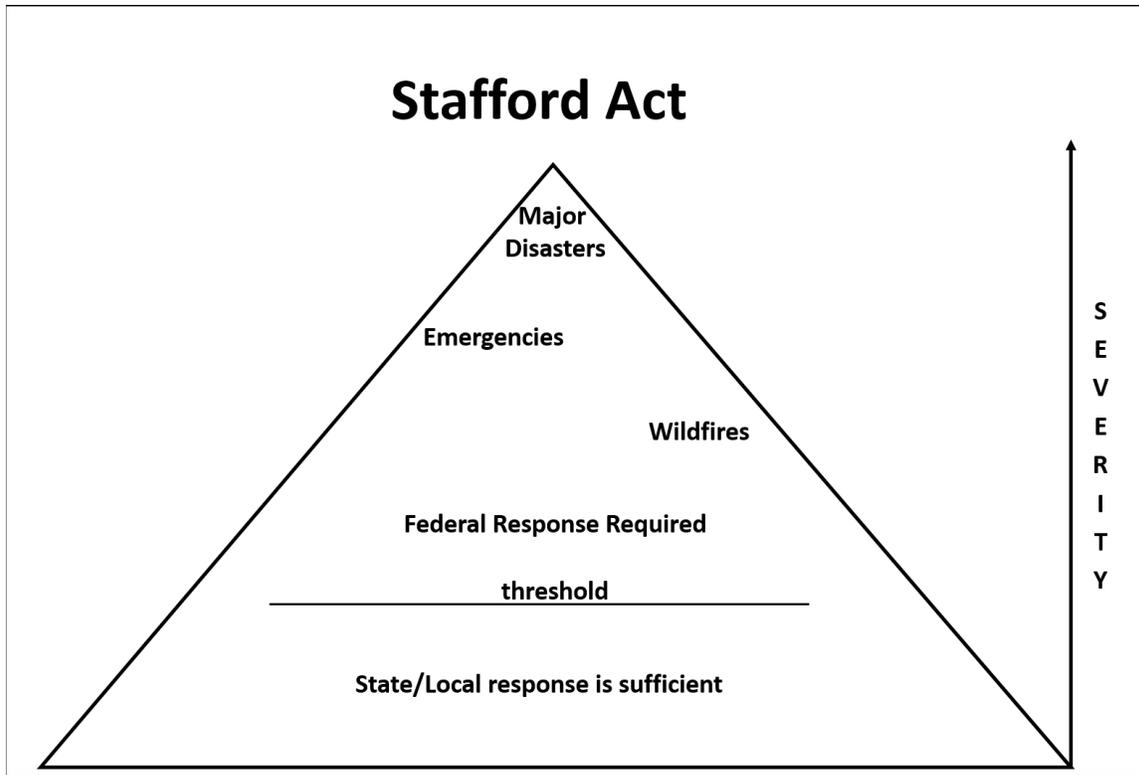


Figure 5. Hierarchy of Declarations under the Stafford Act. Source: Department of the Army [DA] (2010).

Specifically, an Emergency Declaration can be declared at the request of any governor or when the president determines local resources will soon be overwhelmed or federal infrastructure will be threatened (FEMA, n.d.-a). The Emergency Declaration is designed to supplement and augment local authorities to limit loss of life and property while preventing further public health or safety issues. An Emergency Declaration is limited to \$5 million in assistance for a single emergency. When an Emergency Declaration is declared, limited federal resources are utilized (FEMA, n.d.-a).

The second type of declaration the president can execute is a Major Disaster Declaration. A Major Disaster Declaration can be utilized for natural events including hurricanes, floods, wildfires, volcanic eruptions, and snowstorms that have caused damage beyond a State's ability to appropriately respond. When a Major Disaster is declared, a wide range of federal programs may be activated to support states (FEMA, n.d.-a).

Once a declaration occurs, three types of assistance may be activated for the duration of the event depending on the situation: Public Assistance, Individual Assistance, Hazard Mitigation. Public Assistance is provided for emergency work such as search and rescue operations, debris removal, and permanent work such as power restoration, dams and levees, and repair or replacement of government owned infrastructure; the president has the authority to adjust cost shares as necessary. Individual assistance is supplemental assistance for individuals and households such as legal assistance, unemployment assistance, and counseling. The final type of assistance is the Hazard Mitigation assistance. This provides local authorities incentives and grants to upgrade and emplace hazard mitigation measures to prevent loss of life and property prior to future disasters.

Finally, the Stafford Act requires a cost share formula to be employed in all types of federal assistance. The president has the ability to adjust the public assistance cost share, however, they do not have the authority to adjust any of the others (FEMA, 2013).

3. National Response Framework

The NRF is the official United States Government guide for coordination and response of all types of disasters and emergencies. The framework is utilized throughout CONUS, U.S. territories and insular areas providing guidance between all levels of government, private sector, communities, and the federal government (FEMA, 2016b). The Framework is always in effect whether a disaster or emergency is declared or operating in a steady state operation and has evolved over many years to meet the response demands to a major disaster, regardless of size. The NRF is designed to be a “scalable, flexible, and adaptable” (FEMA, 2016b, p. 1) model comprised of concepts that can meet any event, large or small, with the appropriate resources at the appropriate time. The responsibilities and roles outlined in the framework have the ability to be fully or partially implemented as needed to enable “a scaled response, delivery of specific resources and capabilities, and a coordinated appropriate for each type of event” (FEMA, 2016b, p. 1).

The NRF prioritizes the disaster response mission to meet the following objectives: “to save lives, protect property and the environment, stabilize the incident, and provide for basic human needs” (FEMA, 2016b, p. 1).

The NRF is built upon bottom up coordination from the local level through states and finally to the federal government and built around the following principles: “engaged partnership, tiered response, scalable, flexible, and adaptable operational capabilities; unity of effort, and readiness to act” (FEMA, 2016b, p. 1). Engaged partnership relies on the whole community concept where victims are identified and assisted, first responders are engaged, and local coordination occurs to ensure that the right resources get to the right place at the right time. Tiered response revolves around a unified response at the most local of levels, combining resources between citizens, governments, the private sector, and NGOs, such as the American Red Cross to allow for coordination planning and execution without overwhelming the community. Due to the tiered response principle, the ability to scale federal response to what is necessary is a key component enabling resources to be increased or decreased depending on the situation. Unity of Effort through the Unified Command principle provides a clear understanding of the roles and responsibilities of all involved to meet the required needs of assistance (FEAM, 2016b). Finally, the readiness to act is effective risk management and ability to surge resources as the situation requires. These guiding principles of the NRF provide a baseline understanding of what and how response needs to occur to sustain life, save property, and prepare to rebuild in any type of disaster (FEMA, 2016b, pp. 5–6).

By law, DHS is responsible for both natural and manmade crisis and emergency planning. The Federal Emergency Management Agency (FEMA), part of DHS, is the federal government’s lead agency responsible for coordination and response planning and execution within the United States (FEMA, 2016b). When a major disaster or emergency is declared FEMA leads the federal government’s response efforts. They accomplish this through coordinating with executive agencies responsible for key domains. Executive Agencies provide their expertise as a primary or secondary lead in Emergency Support Functions (ESF). ESFs “describe the federal coordinating structures that group resources and capabilities into functional areas that are most frequently needed in a national response” (FEMA, 2016b, p 2).

Figure 6 highlights the fifteen Emergency Support Functions to support and coordinate with FEMA and local authorities for response within specific category types.

ESF	Scope
ESF # 1 -- Transportation	Aviation/airspace management and control Transportation safety Restoration/ recovery of transportation infrastructure Movement restrictions Damage and impact assessment
ESF # 2 -- Communications	Coordination with telecommunication and information technology industries Restoration and repair of telecommunication infrastructure Protection, restoration, and sustainment of national cyber and information technology resources Oversight of communications within the Federal incident management and response structures
ESF # 3 -- Public Works and Engineering	Infrastructure protection and emergency repair Infrastructure restoration Engineering services and construction management Emergency contracting support for life-saving and life-sustaining services
ESF # 4 -- Firefighting	Coordination of Federal firefighting activities Support to wildland, rural, and urban firefighting operations
ESF # 5 -- Emergency Management	Coordination of incident management and response efforts Issuance of mission assignments Resource and human capital Incident action planning Financial management
ESF # 6 -- Mass Care, Emergency Assistance, Housing, and Human Services	Mass care Emergency assistance Disaster housing Human services
ESF # 7 -- Logistics Management and Resource Support	Comprehensive, national incident logistics planning, management, and sustainment capability Resource support (facility space, office equipment and supplies, contracting services, etc)
ESF # 8 -- Public Health and Medical Services	Public health Medical Mental health services Mass fatality management
ESF # 9 -- Search and Rescue	Life-saving assistance Search and rescue operations
ESF # 10 -- Oil and Hazardous Materials Response	Oil and hazardous materials (chemical, biological, radiological, etc.) response Environmental short- and long-term cleanup
ESF # 11 -- Agriculture and Natural Resources	Nutrition assistance Animal and plant disease and pest response Food safety and security Natural and cultural resources and historical properties protection and restoration Safety and well-being of household pets
ESF # 12 -- Energy	Energy infrastructure assessment, repair, and restoration Energy industry utilities coordination Energy forecast
ESF # 13 -- Public Safety and Security	Facility and resource security Security planning and technical resource assistance Public safety and security support Support to access, traffic, and crowd control
ESF # 14 -- Long-Term Community Recovery	Social and economic community impact assessment Long-term community recovery assistance to States, local governments, and the private sector Analysis and review of mitigation program implementation
ESF # 15 -- External Affairs	Emergency public information and protective action guidance Media and community relations Congressional and international affairs Tribal and insular affairs

Figure 6. Scope of Emergency Support Functions. Source: FEMA (2008a).

Each function is executed through an Executive Agency who is primarily responsible for execution and may have one or more supporting agencies to assist. When a

disaster or emergency is declared the whole realm of resources become available through the ESFs.

Agency	ESF # 1 -- Transportation	ESF # 2 -- Communications	ESF # 3 -- Public Works and Engineering	ESF # 4 -- Firefighting	ESF # 5 -- Emergency Management	ESF # 6 -- Mass Care, Emergency Assistance, Housing, and Human Services	ESF # 7 -- Logistics Management and Resource Support	ESF # 8 -- Public Health and Medical Services	ESF # 9 -- Search and Rescue	ESF # 10 -- Oil and Hazardous Materials Response	ESF # 11 -- Agriculture and Natural Resources	ESF # 12 -- Energy	ESF # 13 -- Public Safety and Security	ESF # 14 -- Long-Term Community Recovery	ESF # 15 -- External Affairs
USDA			S		S	S	S	S		S	C/P/S	S		P	S
USDA/FS	S	S	S	C/P		S	S	S	S	S		S	S		
DOC	S	S	S	S	S		S	S	S	S	S	S	S	S	S
DOD	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S
DOD/USACE	S		C/P	S		S	S	S	S	S	S	S	S	S	
ED					S										S
DOE	S		S		S		S	S		S	S	C/P	S	S	S
HHS			S		S	S	S	C/P	S	S	S			S	S
DHS	S	S	S		S		S	S	S	S	S	S	S	P	C
DHS/FEMA	S	P	P	S	C/P	C/P/S	C/P	S	C/P	S	S			C/P	P
DHS/NCS		C/P					S					S			
DHS/USCG	S		S	S				S	P	P			S		S
HUD					S	S								P	S
DOI	S	S	S	S	S	S	S	S	P	S	P/S	S	S	S	S
DOJ	S				S	S	S	S	S	S	S		C/P		S
DOL			S		S	S	S	S	S	S	S	S		S	S
DOS	S		S	S	S			S		S	S	S			S
DOT	C/P		S		S	S	S	S		S	S	S		S	S
TREAS					S								S	S	S
VA					S	S	S	S					S	S	S
EPA			S	S	S			S		C/P	S	S	S	S	S
FCC		S	S		S										S
GSA	S	S			S	S	C/P	S		S	S				S
NASA			S		S		S		S				S		S
NRC					S					S		S			S
OPM			S		S		S								S
SBA					S	S								P	S
SSA					S	S							S		S
TVA			S		S						S	S			S
USAID								S	S						S
USPS	S				S	S		S					S		S
ACHP															
ARC			S		S	S								S	
CNCS			S			S		S						S	
DRA														S	
HENTF															
NARA															
NVOAD						S								S	

Figure 7. Breakdown of Emergency Support Function Responsibility by Federal Agency. Source: FEMA (2008b).

Once a major disaster or emergency is declared FEMA coordinates with federal and local agencies through the principles outlined in Figure 7. Unified Command is of the utmost importance to ensure the proper resources are acquired and delivered to where they are needed. Figure 8 provides a visual representation how the NRF envisions and executed

unified coordination between all representations involved in disaster planning and response that is necessary for mission accomplishment.

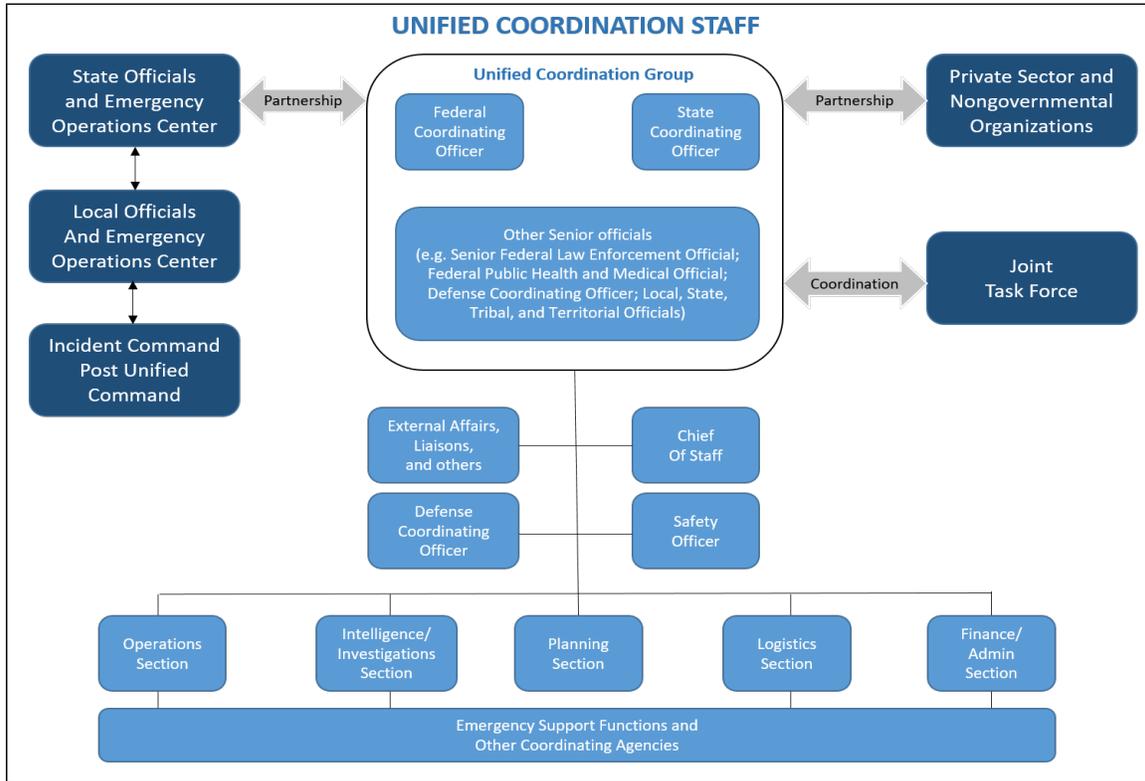


Figure 8. Federal and Local Coordination Staff. Source: FEMA (2016b).

The NRF provides principles and responsibilities to all players in response to an emergency or disaster. The coordinated effort from the State, Local, Tribal, and Territorial plans at the most local level are built together and nested with each higher level of resources. This enables a theoretical smooth response laid out where each participant knows what they must do as part of the response. FEMA is responsible for coordination of these plans through regional offices and interagency discussions and rehearsals.

The goal of the NRF’s implementation is to provide and consider effective practices and lessons learned from exercise, operations, and new technologies to properly stage resources and responders to ensure the proper resources and response meet the

requirements of the disaster as depicted in Figure 9. When a declaration is declared and federal resources are activated, they are vast. The NRF's goal is to coordinate these resources efficiently and effectively.

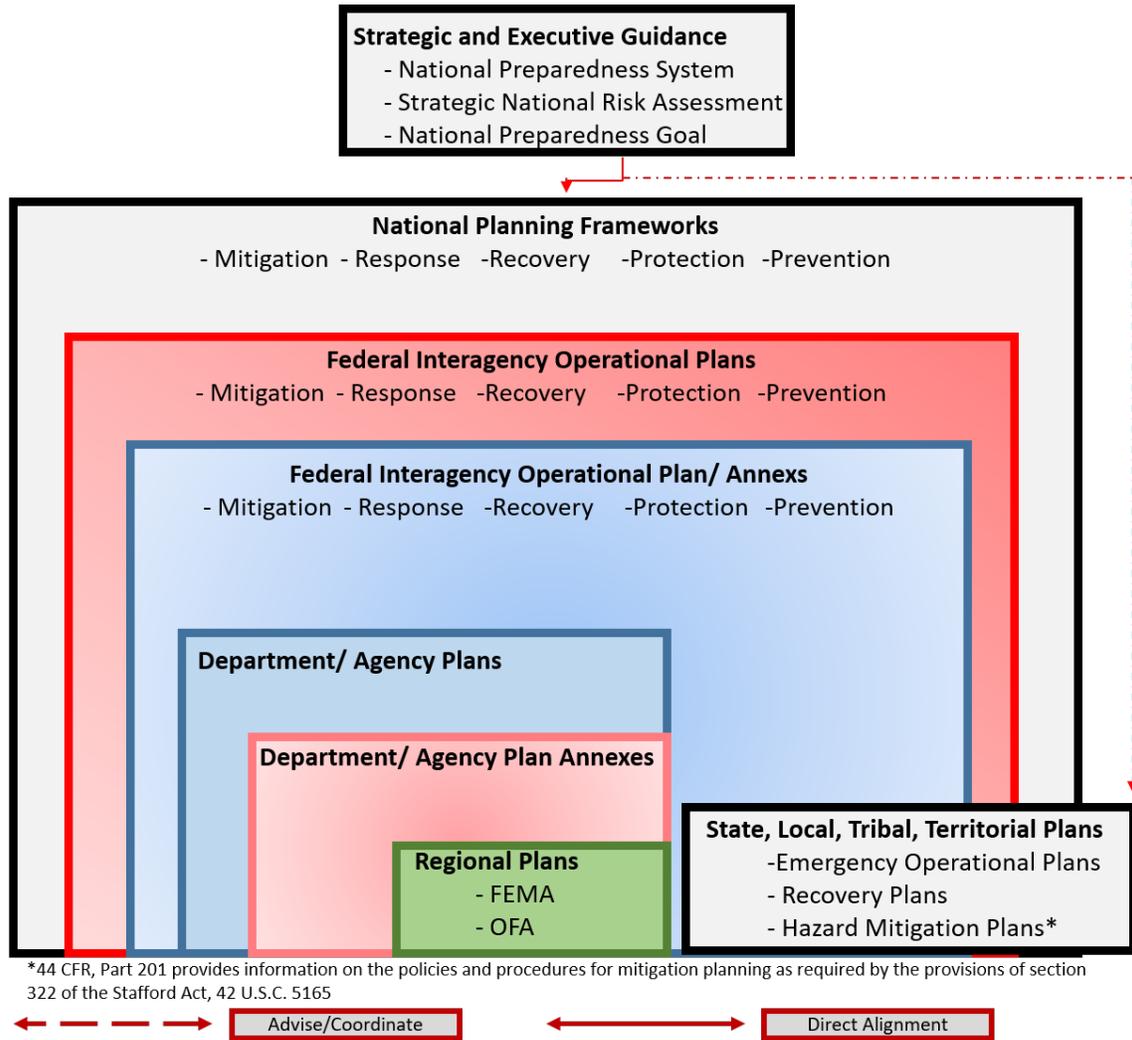


Figure 9. National Response Framework Planning Flow. Adapted from FEMA (2016b).

4. Post-Katrina Emergency Management Reform Act of 2006

The coordinated response to Hurricane Katrina was not a smooth effort between local, state, and federal agencies leading to a lackluster response and causing more loss of life and property than necessary. In the wake of Katrina, Congress investigated the events

and Senator Susan Collins of Maine sponsored the Post-Katrina Emergency Management Reform Act (PKEMRA), which amended the Homeland Security Act of 2002. This Act redirected FEMA's mission within DHS and mandated the following:

(1) leading the nation's efforts to prepare for, respond to, recover from, and mitigate the risks of, any natural and man-made disaster, including catastrophic incidents; (2) implementing a risk-based, all hazards plus strategy for preparedness; and (3) promoting and planning for the protection, security, resiliency, and post-disaster restoration of critical infrastructure and key resources, including cyber and communications assets. (S. 3721, 2006)

The PKEMRA reorganized FEMA to be postured with authorities and resources in order to prevent mishaps that occurred in Katrina from happening again and directed them to be the lead agency and support all "efforts to reduce loss of life and property and protect the nation from all hazards" (Bea, 2017, p. 6). As FEMA was integrated into the DHS Agency, the PKEMRA FEMA a distinct entity within DHS and transferred all functions of the Under Secretary for Federal Emergency Management Directorate back. Furthermore, it established new leadership positions and missions in addition to regaining old missions. The PKEMRA granted new statutory authorities the FEMA Administrator to undertake a wide range of actions before and after disasters occur and create a surge program for non-FEMA employees to volunteer and assist in disaster response (Bea, 2017).

The reforms required through the PKEMRA enabled FEMA and other executive agencies to increase their coordination, planning, and response prior to an event occurring while establishing a streamlined communication process for presidential declaration approval and resources getting to where they are most need.

5. Department of Defense's Role in CONUS Disaster Response

It is no secret that the DoD is the largest executive level agency and has the most experience in large scale movement and logistics planning and execution. Within the CONUS, USNORTHCOM is the Combatant Command (COCOM) charged with military responsibility of the 48 contiguous United States, Alaska, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Canada, and Mexico. USNORTHCOM's civil support mission includes CONUS disaster relief operations when tasked by the DoD by providing

assistance to the Primary Agency in charge of the response until the scope of response is reduced to an extent that resources are no longer overwhelmed and the Primary Agency can assume full management and control (United States Northern Command [USNORTHCOM], n.d.).

Department of Defense Directive (DoDD) 3025.18 and Joint Publication (JP) 3–28 outlines DSCA operations as:

Support provided by federal military forces, DoD civilians, DoD contract personnel, DoD component assets, and National Guard forces in response to a request for assistance (RFA) from civil authorities for domestic emergencies, law enforcement, and other domestic activities, or from qualify entities for special events. DSCA includes support to prepare, prevent, protect, respond, and recover from domestic incidents including both natural and man-made disasters. (Department of Defense [DoDD], 2018 and (Joint Chiefs of Staff [JCS], 2013, p I-2)

USNORTHCOM conducts its planning and execution through the DSCA guidance which provides the DoD framework and authorities to provide assistance when requested as well as enables the DoD to provide capabilities to protect life, property, and critical infrastructure within CONUS. DSCA may incorporate all entities and capabilities needed within the DoD in accordance with statutory and departmental regulations. The DoD and USNORTHCOM provide gap capabilities while local resources are overwhelmed and remain on station until no longer needed. They accomplish this in accordance with Title 10 and Title 32 of the United States Code and the Posse Comitatus Act to ensure “seamless coordination among federal, state, territorial, tribal, and local governments to prevent, protect against, and respond to threats and natural disasters” (JCS, 2013, p I-1).

Title 32 of the United States Code is the law establishing, organizing, and maintaining a National Guard. Section 328 provides the follow authority:

The Governor of a State or the Commonwealth of Puerto Rico, Guam, or the Virgin Islands, or the commanding general of the District of Columbia National Guard, as the case may be, with the consent of the Secretary concerned, may order a member of the National Guard to perform Active Guard and Reserve duty, as defined by section 101(d)(6) of title 10, pursuant to section 502(f) of this title. (Title 32, 1956)

JP 3–28 explains that due to their local presence and state control, the National Guard will be the first military responder during a crisis. A state governor will activate its National Guard under Title 32 for response due to their ability to assist law enforcement and support operations.

Title 10 of the United States Code is the law establishing the Active Duty Military, its functions, structures, personnel, training, among others. Active duty personnel are not authorized to conduct law enforcement activities within the United States due to the Posse Comitatus Act. However, they are authorized to perform support functions as directed (Title 10, 1956). “Unless expressly authorized by the Constitution or by an act of Congress,” (Posse Comitatus, 1956) does not allow active duty military forces to conduct any law enforcement activities on U.S. soil.

Figure 10 provides an overview on the difference between Title 10 and 32 and State National Guard Active Duty troops and capabilities:

Category	State Active Duty	Title 32	Title 10
Command and Control	Governor	Governor	President
Who performs duty	Federally organized National Guard	Organized National Guard in service of U.S. ¹¹	AC, RC ⁶ and National Guard of U.S. ¹¹
Where duty performed	Home state or IAW EMAC	United States	Worldwide
Mission types	IAW state law	Inactive Duty Training (IDT), Annual Training (AT), State Active Guard and Reserve (AGR) & other federally authorized	Overseas Duty for Training (ODT), Active Duty for Training (ADT), AGR & as assigned, subject to PCA
Pay	In accordance with (IAW) state law	Federal pay and allowances	Federal pay and allowances
Federal reimbursement	IAW Stafford Act ⁹ or Cooperative Agreement ¹⁰	N/A – personnel cost paid by federal funds	N/A personnel cost paid by federal funds
Tort Immunity	IAW state law	FTCA ⁴	FTCA
PCA ¹ application	No	No	Yes
USERRA ²	No, IAW state law	Yes	Yes
SSCRA ³	No, IAW state law	No	Yes
Discipline	State military code	State military code	UCMJ ⁵
Medical	IAW state law	Federal	Federal
Disability	IAW state law	Federal	Federal
Involuntary order to duty	IAW state law	Yes ⁷	Yes ⁸
Voluntary order to duty	IAW state law	Yes	Yes

Figure 10. State Active Duty, Title 32, and Title 10 Comparison.
Source: DA (2010).

Although Title 10 military personnel are not allowed to conduct law enforcement activities, they have the authority to provide support when requested by the governor and directed by the president in accordance with DoD Directives and National Frameworks and for as long as local resources are overwhelmed.

Within the DoD, USNORTHCOM is responsible for CONUS disaster response. USNORTHCOM Concept Plan (CONPLAN) 3501–18, provides their framework for planning and execution. CONPLAN 3501–18 contains a six-phase plan for DSCA operations:

Phase 0: Shape. Phase 0 is a continuous situational awareness and preparedness. Actions in this phase include interagency coordination, planning, identification of gaps, exercises, public affair outreach.

Phase 1: Anticipate. Phase 1 begins with the identification of a potential DSCA mission and when resources or assigned forces deploy and are postured to facilitate quick response after coordination with the Primary Agency.

Phase 2: Respond. Phase 2 begins with initial Title 10 response capabilities.

Phase 3: Operate. Phase 3 begins with the Title 10 DSCA response operations.

Phase 4: Stabilize. Phase 4 begins when DoD DSCA resources begin to draw down

Phase 5: Transition. Phase 5 begins with the deployment of Title 10 DSCA forces and ends when all USNORTHCOM DSCA functions have been transitioned to civil authorities (DA, 2010, p. 5–74).

The above phases enable USNORTHCOM to plan, coordinate, posture, and execute when requested while rehearsing and refining continuously. CONPLAN 3501–18 provides the basis for DoD’s support to FEMA and other agencies at the federal, state, and local levels.

Dr. Aruna Apte and Susan Heath (2011) in their article titled: *Request and Response Processes for Department of Defense Support during Domestic Disasters*, contend that the federal government and particularly the DoD is widely considered a lynchpin for supporting CONUS disaster response and relief operations given its well-equipped and well-trained workforce as well as resource portfolio (2011, p. 3). Domestic disaster response (DR) requirements frequently surpass state and local resource capabilities and necessitate DoD intervention (2011, p. 1) However, there are a number of variables and complexities at play that often hamper its efficacy in this arena. These include the layers

of civil response, the multitude of executive agencies that are deployed in support of disaster relief, regulatory requirements and restrictions placed upon the DoD for disaster response as well as a general lack of knowledge regarding DoD involvement and capability to support response operations (2011, p. 1). The active duty components of the DoD military are denoted as title 10 forces as they are overseen by title 10 of the U.S. Code and unique legal restrictions are placed upon each branch during Defense Support to Civil Authorities (DSCA) activities (2011, p. 5). These wide range of individual lines of authority present unique legal and bureaucratic challenges which further complicate DoD response effectiveness.

Apte and Heath (2011) address the general lack of understanding surrounding the specific functionality of the DoD as well as its corresponding limitations and legal restrictions for disaster response that many relief personnel share (2011, p. 4). Despite the vast resources the DoD has at its disposal there is often a lack of DR execution stemming from a myriad of federal restrictions and a general lack of awareness regarding DoD involvement protocol and its respective role in disaster response (2011, p. 1). Their research further provides a summary of standardized civil response procedures for local, state and federal agencies pertinent to domestic disasters (2011, p. 7).

The standardized DR process, as illustrated in Figure 11 is predicated on an incremental involvement concept whereby resources and capabilities are called upon as needed to ensure adequate disaster response (Apte & Heath, 2011, p. 7). This process relies upon multi-agency coordination and involves key response capabilities from local civilian emergency management, nongovernmental organizations, local and state officials, as well as potentially the federal government and the DoD (Apte & Heath, 2011, pp. 7–9).

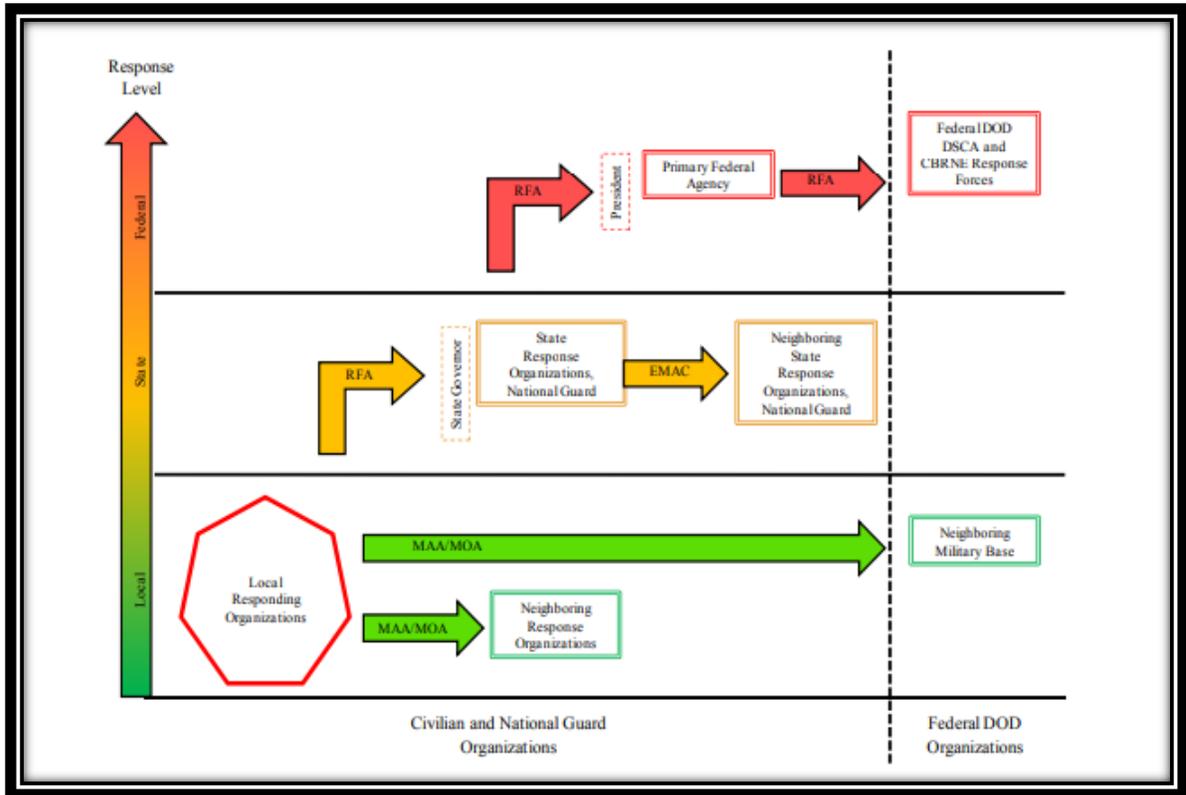


Figure 11. Organizational Response Process. Source: Apte & Heath (2011).

Understanding the specific processes for requesting DoD support for disaster response is crucial for DR effectiveness and promotes protocol transparency for all disaster response stakeholders (Apte & Heath, 2011, p. 16).

Prior research conducted by Daniel Davis and Eugene Ho, NPS 2018 graduates, provides some perspective into the DoD's support role during domestic natural disasters. The preponderance of their research focuses on the 2017 hurricane season with a specific emphasis on Hurricanes Harvey, Irma and Maria and the subsequent DoD level of involvement for support activities. They offered three primary hypothesis based on their study: (1) the DoD level of support during domestic hurricane relief operations is less robust than other federal agencies; (2) DoD support could be enhanced based on a the commonality of tasks required by hurricane events; and (3) prepositioning of critical support elements has a positive impact on the quality of response (Davis & Ho, 2018).

FEMA relies on the DoD perhaps more than any other federal agency for CONUS disaster relief support. In fact, the DoD received between 38% to 49% of all FEMA mission assignments (MA) and provides key support in areas of: transportation, public works, engineering, search and rescue as others (Davis & Ho, 2018, p. 37). The 2017 hurricane season, given the magnitude of destruction and rapid succession of hurricane events, provides excellent data sampling for better understanding of the DoD's role in CONUS disaster relief. Given the current and projected level of DoD support with FEMA for domestic disaster relief, it is vitally important that we continue to identify areas for improvement in order to promote effective response.

Stella Obayuwana and Eric Lockett, NPS 2010 graduates, published their MBA Professional Report: *An analysis of the U.S. Department of Defense contracting and logistics support during the first 100 hours of the 2010 Haitian disaster response operation*. Their research analyzed DoD level contracting and logistics processes in support of Operation Unified Response (OUR) with an emphasis on response time, coordination of efforts, support adequacy as well as contract administration and logistics management (Obayuwana & Lockett, 2010). Additionally, their research aimed to understand and identify how contracting and logistics support, provided by the DoD, assisted key planners and response coordinators to deal with the various challenges they faced when attempting to provide lifesaving support to those affected by the earthquake in Haiti.

Obayuwana and Lockett provided in-depth investigation related to the DoD's effectiveness of response to the Haiti Earthquake as well as identified recommendations for systematic improvement (Obayuwana & Lockett, 2010, p. 46). In addition, they provided historic literature linking disaster events and the proportionate DoD response, identified the variety of challenges facing disaster response personnel tasked with OUR as well as provided research analysis findings which indicated shortcomings in DoD response and effectiveness primarily linked to Command and Control (C2) deficiencies and a general failure to adapt based on previous disasters (Obayuwana & Lockett, 2010). Finally, they created the Stella's Future Contracts and Logistics Model (SFCLM) which was inspired by the YTTM. This model was conceived as a means of effectively providing early

identification and training for disaster support logistics and contracting personnel in order to enhance DoD response capabilities (Obayuwana & Lockett, 2010, p. 56).

6. Conclusion of Disaster Response Operations

In this section we explored the statutory resources available through the Stafford Act and how local authorities request federal assistance, we examined the NRF and provided an understanding on the roles and responsibilities of local, state, federal agencies and how they can interact with the private sector to assist in planning and response. Finally, we examined the DoD's DSCA operations, specifically how USNORTHCOM plans, postures, and executes response operations when requested in accordance with applicable statutory requirements.

C. FEDERAL CONTRACTING PROCESS

1. Introduction

The federal government relies on contract support to acquire a wide range of supplies and services necessary to meet mission objectives. These requirements vary drastically across the landscape of federal activities and as such the FAR provides overarching guidance to support contract processes and procedures. In this chapter we briefly discuss the federal contract process for procuring goods and services, discuss types of contracts as well as provide a broad overview of funding and miscellaneous regulatory requirements that have implications on CONUS emergency and natural disaster response.

2. Overview of the Federal Contracting Process

The basic construct for the federal government to procure critical goods and services involves a number of key activities designed to ensure fair and equitable treatment of potential suppliers while delivering the best value to the government and taxpayer. The government procurement process begins with agency requirement generation where the proper identification of necessary goods and services are developed. At that point it is the responsibility of the contracting activity and specifically the Contracting Officer (KO) overseeing the acquisition to make a determination of the most appropriate purchasing methodology. Government requirements are solicited in a manner commensurate with their

complexity and value, though generally the Federal Business Opportunities website (FBO) is the primary solicitation vehicle for public awareness for acquisitions exceeding \$25K (Halchin, 2012).

Solicitations generally provide information to respective offerors including but not limited to: minimum agency requirements (what it wants to purchase), instructions for proposal submission, applicable source-selection methodology for contract award as well as applicable timelines for proposal submission (Halchin, 2012). Interested vendors are given an opportunity to respond accordingly IAW with the specified provisions outlined in the government solicitation. Additionally, the government is charged with reviewing and evaluating offers fairly and objectively, IAW the stated source selection criteria addressed in the solicitation, to meet agency needs. A contract award is presented to the responsible vendor representing the best value to the government.

The warranted KO is charged with carrying out the acquisition to deliver the product or service to the requirement's owner efficiently while maintaining oversight of cost, schedule and performance objectives (Halchin, 2012, p.2). The KO must consider a variety of complex factors that may influence their respective strategy or decision making throughout the acquisition. These factors include: overall price thresholds necessitating the utilization of simplification or complex acquisition procedures, urgency and complexity of the requirements in question, federal supply schedule utilization to source items as well as required sources of supply as well as small business set aside requirements. Suffice to say, there are numerous strategies and considerations that must be evaluated to ensure the integrity as well as efficiency and effectiveness of the federal government procurement process.

There are distinct stages which encapsulate the federal contracting process which for purposes of simplicity can be viewed in the context of pre and post-contract award. Once an award has been made the focus shifts to contract performance and administration with efforts designed to ensure the government receives what it paid or is paying for, with respect to cost, schedule and performance objectives. Conversely, the government during this stage has a responsibility to uphold its contractual obligation to the contractor based on the terms and conditions of the contract. The post-award stage is often defined by post

award orientation events, contractor surveillance and monitoring, invoice and payment processing, contract modifications, quality assurance actions and other key activities designed to promote a win-win relationship for the government and the contractor (Halchin, 2012).

In order to be deemed eligible to receive government contracts there are a number of requisite steps and approvals that must be completed. It is required that a company, at a minimum obtain a Data Universal Numbering System (DUNs) number and also register themselves in the federal government's central System for Award Management (SAM) (Halchin, 2012). Additionally, for federal entities who specialize in CONUS disaster relief and emergency response support there may be additional vendor requirements. For example, interested companies must request a FEMA vendor profile from the industry liaison support center (ILSC) for the purposes of vendor database collection/market research for declared disaster areas (FEMA, 2018d).

There are a variety of government resources that have been created to assist current and hopeful vendors who are either doing business with the government currently or who aspire to do so. A few of these include the General Services Administration (GSA), Minority Business Development Agency (MBDA), Procurement Technical Assistance Program (PTAP) as well as the Small Business Administration (SBA). These agencies provide an assortment of services and assistance to vendors including supply schedule information, training, guidance, technical assistance services, product marketing strategies as well as general information related to understanding the government procurement process and vendor eligibility requirements (Halchin, 2012).

The precise requirements that result from CONUS natural disasters and emergencies range in nature and volume though share some degree, a level of predictability. These include basic lifesaving and life sustaining supplies and services such as food, water, medical equipment and supplies, fuel, shelter, debris removal, infrastructure repair and many more (FEMA, n.d.-a). In order to effectively posture for disasters and emergency situations from a contracting and acquisition perspective, it is incumbent upon federal agencies to be proactive and deliberate in their approach. This includes personnel training and familiarization with statutory and regulatory guidance governing emergency

response, ensuring a robust supplier base is present to respond expeditiously as well as the deliberate and strategic establishment of various procurement vehicles capable of delivering rapid response. These procurement types range from Blanket Purchase Agreements (BPA), Indefinite Delivery Indefinite Quantity (IDIQ) contracts, Interagency Agreements as well as Government Purchase card programs to name a few.

Additionally, the Department of Homeland Services and FEMA specifically utilizes MA designations to request services and assistance from Other Federal Agencies (OFA) in anticipation of, or upon Presidential Disaster Declaration (FEMA, 2007a). This is a critical component of FEMA's asset procurement and facilitation service given their primary function as a lead coordination body. To be clear, "FEMA's expertise in emergency management and its close relationships with State, Tribal, and local emergency responders make it an ideal representative to coordinate protective measures for the emergency services sector" (FEMA, 2010). It largely relies on contract staff and support of federal support services to meet its mission. OFA's, upon receipt of MA's are statutorily required to provide assistance as prescribed in the Stafford Act, 44 Code of Federal Register (CFR) as well as the National Response Plan (NRP) (FEMA, 2007a). Interestingly enough, the KO is not directly responsible for the execution or oversight of MA's. Rather, a Mission Assignment Coordinator (MAC) is delegated responsibility and authority of this process.

3. Contract Types

FAR subpart 16 "describes types of contracts that may be used in acquisitions; it also prescribes policies and procedures and provides guidance for selecting a contract type appropriate to the circumstances of the acquisition" (Federal Acquisition Regulation [FAR], 2018, Part 16.000). According to FAR 16.101 contract types vary according to:

The degree and timing of the responsibility assumed by the contractor for the costs of performance; and the amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals. (FAR, 16.101)

Contract types are broadly categorized into two distinct groups: fixed-price and cost-reimbursement contracts. "The specific contract types range from firm-fixed-price, in

which the contractor has full responsibility for the performance costs and resulting profit (or loss), to cost-plus-fixed-fee, in which the contractor has minimal responsibility for the performance costs and the negotiated fee (profit) is fixed” (FAR, 16.1). Additionally, there is considerable variance in terms of the level of risk the government assumes when it chooses to award fixed-price or cost-type contracts. In accordance with FAR 16.104 KOs must consider a variety of factors when making a determination of suitable contract type to include: “price competition, price analysis, cost analysis, type and complexity of requirement, urgency of requirements, period of performance, contractor technical capability and financial responsibility, adequacy of the contractor’s accounting system, concurrent contracts, extent and nature of proposed subcontracting as well as acquisition history” (FAR, 16.104). It is paramount for KOs to understand the various types of contracts at their disposal when procuring critical goods and services. The graph below provides a broad capture of contract types and associated risk.

In addition to the myriad of contract types available for government use it is also important to understand the various contract vehicles and mechanisms in place for contract execution. These include anything from IDIQ contracts, which include definite quantity, requirements and indefinite quantity contracts, Letter contracts, Agreements to include Basic Ordering Agreements (BOA) and BPA’s and Federal Multiple Award Schedules, to name a few. For the purpose of our research, we have limited our scope to those contract types and vehicles we feel provide the greatest opportunity to support CONUS natural disaster and emergency contract operations.

COST RISK AND CONTRACT TYPE					
Cost Risk	HIGH		←————→		LOW
Requirements Definition	Poorly-defined		←————→		Well defined
Production Stages	Concept Studies & Basic Research	Exploratory Development	Production Stages	Full-scale Development	Follow-on Production
Contract Types	Varied types of cost-reimbursement contracts	CPFF	Contract Types	CPIF, FPIF, or FFP	FFP, FPIF, or FPEPA
When . . .			Select a . . .		
The offeror can actually estimate cost.			Firm-fixed Price Contract		
Economic conditions that will likely affect cost significantly are outside of the offeror's control, but otherwise the offeror can accurately estimate cost.			Fixed-Price Economic Price Adjustment Contract		
There are substantial cost uncertainties, but it should be possible to reasonably estimate maximum cost and effect contractor management should be able to assure the final costs with not exceed the estimate maximum cost.			Fixed-Price Incentive Fee Contract		
The cost uncertainties are so great that any fixed-priced contract would force the contract to accept an unreasonable risk, but you can negotiate reasonable targets and formulas for sharing costs.			Cost-Plus-Incentive-Fee Contract		
The contract level of effort is uncertain and it is NOT feasible of effective to negotiate an adjustment formula but the likelihood of meeting objective can be enhanced by a clear subjective fee plan.			Cost-Plus-Award-Fee-Contract		
Cost uncertainty is so great the establishment of predetermined targets and incentive sharing arrangements could result in a final fee out of line with the actual work.			Cost-Plus-Fixed-Fee-Contract		

Figure 12. Federal Procurement Process Flow. Source: National Oceanic and Atmospheric Administration [NOAA] (n.d).

4. Typical Funding Streams in Natural Disasters

Disaster assistance and response within CONUS is underpinned by an intricate and complex fiscal relationship that exists across all levels of government to include local, state and federal (The Pew Charitable Trusts [PEW], 2018). Significant outlays of cash are expended and publicized in support of post-federal disaster declaration. However, prior to this formal presidential declaration which is governed by The Stafford Act, local and state

governments allocate significant funds and resources to respond to catastrophic events. As we have seen throughout history, often disaster relief requirements necessary for effective and efficient response simply overwhelm local and state municipalities and require federal assistance and/or intervention.

Federal assistance in the wake of catastrophe unlocks a number of assistance channels and resources designed to offset the costs of federally declared disasters (Pew, 2018). In fact, there are 300 federal programs spanning 17 departments and agencies that provide critical disaster relief assistance which include DHS and FEMA, Transportation as well as Housing and Urban Development as well as others (Pew, 2018). Between fiscal years 2005–2014 these federal support agencies obligated over 25 billion dollars annually and in excess of \$277.6 billion in support of disaster relief across the U.S. (Government Accountability Office [GAO], 2016). These cash outlays derive from three primary disaster relief categories: FEMA’s Disaster Relief Fund (DRF) (\$104.5 billion) as well as disaster-specific (\$132 billion) and disaster-applicable (\$40.9 billion) programs and activities spanning the 17 departments mentioned above.

There are a number of factors the federal government considers in order to determine a state’s eligibility to receive federal assistance, not the least of which is their (state) internal capability to respond effectively. It is worth noting that between 2005 and 2014 every state within the U.S., including the District of Columbia, has been victim to disasters warranting federal emergency or major disaster declaration (Pew, 2018). These disasters range from major flood and storm damage, hurricanes, wild fires and blizzards. As stated, the president is vested the authority to issue two types of declaration be it emergency or major disaster. Emergency declarations center around providing immediate protection of lives, resources and safety while a major disaster declaration provides for long-term emergency funding availability in the face of events which have resulted in severe damage exceeding the capabilities of state and local governments (FEMA, n.d.-a).

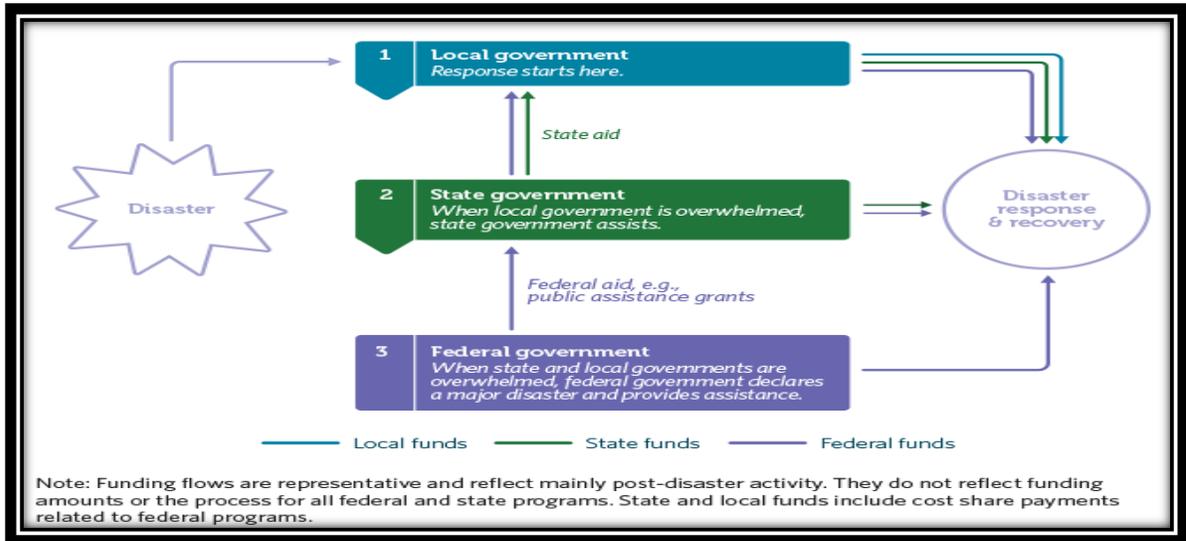


Figure 13. Federal to Local Intergovernmental Funding Flow. Source: Source: Pew (2018).

5. Pre-event funding

“The DRF is the main account used to fund a wide variety of disaster assistance programs that provide grants and other forms of support to assist state local, and tribal governments, as well as certain nonprofit entities during disaster recovery,” wrote Lindsay (2014 p. 6). As the primary account for disaster response, the DRF is relied upon to fund future incidents while simultaneously supplement current projects required to recover from previous catastrophes. The DRF is unique in that the funds within are typically only released upon presidential declaration of emergency or major disaster IAW the Stafford Act (Lindsay, 2014, p. 2).

Additionally, the DRF is congressionally funded on an annual basis via regular appropriations. However, the DRF is constituted as a no-year account where remaining funds are essentially rolled over year to year and are not subject to expiration or cancellation (Lindsay, 2014, p. 4). This funding architecture is paramount given the critical nature of the requirements for which these funds are appropriated, allocated and obligated. The DRF balance crosses fiscal years and these funds are also sheltered and available during any potential government shutdown or appropriation lapse (Lindsay, 2014). It is not uncommon for the DRF to be depleted prior to fiscal year end given the ever-increasing

rise of natural disasters prompting emergency and major disaster declarations by the president. The DRF as approved by congress and can be replenished when the need arises to ensure adequate funds are in place to support ongoing recovery efforts and posture for future events. Figure 14 illustrates DRF supplemental funding actions between 2004 and 2013. In some years there have been as many as three (3) supplemental appropriations due to large scale major disasters and/or a string of incidents necessitating funding increases (Lindsay, 2014, p. 5).

(in millions of dollars)		
Fiscal Year	Number of Supplemental Appropriations	Amount
2013	1	\$11,485
2012	1	\$6,400
2011	0	0
2010	1	\$5,100
2009	0	0
2008	3	\$10,960
2007	1	\$4,092
2006	2	\$6,000
2005	3	\$43,091
2004	2	\$2,500
Total	14	\$89,628

Figure 14. Supplemental Funding for the Disaster Relief Fund.
Source: Lindsay (2014).

According to a 2016 GAO report, the federal government obligated over \$95 billion directly from the DRF necessary to respond to some 650 major disasters between 2004–2013 as declared under the Stafford Act (GAO, 2016).

6. FAR Requirements

The FAR establishes uniform policies and procedures for which all executive agencies are to follow (FAR, 1.101). The FAR provides the backdrop for the federal acquisition process and has been developed to satisfy requirements owners with respect to

cost, quality and timeliness of products and services, to the greatest extent practicable utilize responsible contractors based on past performance and ability and promote competition. Additionally, the FAR is concerned with reducing administrative costs, promoting fair and equitable business practices and satisfying public policy objectives (FAR, 1.102).

The FAR provides specific guidance for Emergency Acquisitions, as outlined in subpart 18, which identifies procurement flexibilities and streamlined practices under urgent and compelling circumstances. These include flexibilities in support of contingency operations, defense or recovery from certain attacks, humanitarian or peacekeeping operations as well as in the event that an emergency or major disaster declaration has been issued by the president under the Stafford Act (FAR, 18.2). The primary flexibilities are centered around supplier preference and business set-asides, though FEMA acting as the lead agency for disaster relief efforts, is also afforded the opportunity to restrict competition and raise micro-purchase and simplified acquisition thresholds to promote the streamlined acquisition of critical goods and services (FEMA, 2007, p. 13). FAR 18 does not however, supersede other areas of the FAR. Rather it provides additional procurement flexibilities to contract personnel to response to emergency situations.

It is worth noting that there are two primary categories of procurement flexibilities: those are that are readily available for use and those that are activate only after a formal emergency declaration has been issued (FEMA, 2007, pp. 13–15). For the purposes of this research we are primarily interested in those acquisition flexibilities and contracting processes that are enacted and utilized by the DoD and FEMA specifically in the event of an emergency or major declaration as prescribed in FAR 18.203. These include micro-purchase and simplified acquisition threshold increases issued by the Head of Contracting Activity (HCA) necessary to relieve KOs from a number of regulatory and competition requirements (FEMA, 2007, p. 14). The HCA is tasked with evaluating and modifying these thresholds to support effective and efficient contract solutions based on the environment in which FEMA is operating. Another flexibility includes the KO's ability to limit the use of full and open competition requirements thus allowing them to award contracts to specified sources forgoing normal competition requirements. An additional

acquisition flexibility provides that goods and services required to support an emergency are to be purchased from organizations or individuals doing business in and around the area directly affected by said disaster or emergency (FEMA, 2007). These as well as additional acquisition polices are designed to reduce regulatory requirements and streamline contracting processes so as to provide critical and timely goods and services to those affected by disasters and emergency situations.

Finally, the Acquisition Flexibilities as prescribed in FAR 18 call for the utilization of Government Wide Area Contracts, GSA Schedules, Strategic Sourcing Contracts, Multi-Agency BPAs, Multi-Agency IDIQ Contracts (FAR, 18.2). These contract vehicles further support expeditious response and provide KOs with additional tools and contract solutions to responds effectively to crisis situations. There are specific authorities available during any type of emergency situation to include: relief from registration in the CCR, relief from Use of Electronic Funds Transfer (EFT), as well as defense or Recovery from Specific Attacks (FAR, 18).

An important distinction to be made is between federal contract planning and execution utilizing standard and emergency acquisition techniques and that of Contingency Contracting. Contingency operations are military operations where armed forces personnel, under the direction of the Secretary of Defense, are involved in actions, operations and/or hostilities against U.S. adversaries (FAR, 2.101). “Contingency contracting is the process of obtaining goods, services, and construction from commercial sources in support of contingency operations” (Contingency, 2018).

7. Contractor Responsibility Determination

The federal government has unrestricted authority to determine who and how a federal contract may be awarded and to determine the terms and conditions for an award utilizing federal monies. The KO is responsible for determining if a prospective awardee is capable of completing the requirements in accordance with all terms and conditions the contract. FAR 9–103 states:

- (a) Purchases shall be made from, and contracts shall be awarded to, responsible prospective contractors only.

(b) No purchase or award shall be made unless the contracting officer makes an affirmative determination of responsibility. In the absence of information clearly indicating that the prospective contractor is responsible, the contracting officer shall make a determination of nonresponsibility.

(c) The award of a contract to a supplier based on lowest evaluated price alone can be false economy if there is subsequent default, late deliveries, or other unsatisfactory performance resulting in additional contractual or administrative costs. While it is important that Government purchases be made at the lowest price, this does not require an award to a supplier solely because that supplier submits the lowest offer. A prospective contractor must affirmatively demonstrate its responsibility, including, when necessary, the responsibility of its proposed subcontractors.

A contractor's responsibility determination is paramount in ensure the successful complete of requirements. The KO conducts a seven-part test to determine if a contractor has the financial, technical, and management capabilities to fulfill the requirement. The seven-part test is outlined in FAR 9.104-1 and described by Kate Manuel (2013) states that in order to be determine responsible, the contractor must:

Item one: Have adequate financial resource to perform the contract, or the ability to obtain them. KOs consider the factors used to assess traditional businesses to include ratio of assets to liabilities, working capital, cash flow projection, credit, liquidity, and profitability.

Item two: Be able to comply with the required or proposed delivery or performance schedule. A KO looks at any circumstance that may impact this factor to include labor disputes, relocation, prior contract issues, in ability that subcontractors or suppliers can perform.

Item three: Have a satisfactory performance record. FAR 9.104-4(a) states: Generally, prospective prime contractors are responsible for determining the responsibility of their prospective subcontractors. Determinations of prospective subcontractor responsibility may affect the Government's determination of the prospective prime contractor's responsibility. A prospective contractor may be required to provide written evidence of a proposed subcontractor's responsibility.

Item four: Have a satisfactory record of integrity and business ethics. The KO can examine past behavior by the company including convictions or indictments, integrity offenses, violations of state law or pending debarments.

Item five: Have the necessary organization, experience, accounting, and operational controls, and technical skills, or the ability to obtain them. The KO focuses on prior work experiences and current organization of the company. They look to see if the contractor has the proper programs in place or can get them in place for things such as quality, engineering, accounting, etc. Furthermore, the KO will examine if the company has the proper technical and managerial experience required to complete the requirements.

Item six: Does the contractor have the necessary production, construction, and technical equipment and facilities, or the ability to obtain them. Does the contract possess the proper equipment or necessary facilities or cannot show an ability to obtain them in order to fulfill the requirement.

Item seven: Is the contractor otherwise qualified and eligible to receive an award under applicable laws and regulations. The KO will examine if any specific laws or regulations prohibit the contractor from receiving an award.

Items one, five, and six provide examination by the KO if the contract is able to obtain the necessary requirements. FAR 9.104-3(a) provides what the contract must do and what the KO will examine, specifically:

(a) *Ability to obtain resources.* Except to the extent that a prospective contractor has sufficient resources or proposes to perform the contract by subcontracting, the contracting officer shall require acceptable evidence of the prospective contractor's ability to obtain required resources. Acceptable evidence normally consists of a commitment or explicit arrangement, that will be in existence at the time of contract award, to rent, purchase, or otherwise acquire the needed facilities, equipment, other resources, or personnel. Consideration of a prime contractor's compliance with limitations on subcontracting shall take into account the time period covered by the contract base period or quantities plus option periods or quantities, if such options are considered when evaluating offers for award.

Furthermore, FAR 9.104-3(b) explains criteria for item three. Specifically,

Satisfactory performance record. A prospective contractor that is or recently has been seriously deficient in contract performance shall be presumed to be nonresponsible, unless the contracting officer determines that the circumstances were properly beyond the contractor's control, or that the contractor has taken appropriate corrective action. Past failure to apply sufficient tenacity and perseverance to perform acceptably is strong evidence of nonresponsibility. Failure to meet the quality requirements of the contract is a significant factor to consider in determining satisfactory performance. The contracting officer shall consider the number of contracts involved and the extent of deficient performance in each contract when making this determination.

The seven-part test for responsibility determination is imperative to the successful completion of a contract. Furthermore, this paper examines contracting in a short suspense CONUS disaster response, ensuring that a contractor has the ability and capability to meet the government's contracting requirements may prove lifesaving or fatal.

8. Source Selection Procedures

The term "source selection" typically refers to the systematic process of reviewing and evaluating competitive bids as a means of awarding contracts to entities that are best suited to fulfill requirements or represent the best value to the government. In the context of the FAR, source selection is largely associated with acquisitions awarded in accordance with FAR parts 13, 14, or 15. These parts are as follows: Simplified Acquisition Procedures, Sealed Bidding, or Contracting by Negotiation (Source Selection, 2017). Given the unique nature of the FEMA's and DoD mission, as well as pressure to respond expeditiously to natural disasters, source selection processes have historically been identified as an area of improvement.

Source Selection processes can either be formal or informal depending on a number of factors to include value and complexity of the acquisition in question. Formal source selection procedures, as outlined in the FAR, are used for high-dollar value and complex acquisitions. Formal procedures place the contractor selection and contract award and decision with an independent source selection authority (SSA) other than the Procuring Contracting Officer (PCO). The formal process is initiated by the establishment of an evaluation plan and is finalized upon SSA selection of a responsible contractor to fulfill government requirements. Contrarily, informal source selection procedures are far less cumbersome and the PCO essentially acts as the SSA. They are responsible for identifying and selecting those contractors who represent the best value to the government without formal and required inputs from additional government officials (Source Selection, 2017).

According to FAR Subpart 15.1, Source Selection Processes and Techniques are applied on a Best Value Continuum which is aimed at achieving an optimal negotiated result for the government (FAR, 15.1). Achieving this best value position via source selection occurs by utilizing one or a combination of source selection processes based on

the type of acquisition, relative importance of cost and price elements as well as risks associated with the complexity of the acquisition itself. Clearly defined requirements typically reduce risks associated with unscheduled contractor performance and subsequently place greater emphasis on cost and price features (FAR, 15.101). On the other hand, complex requirements which are typically characterized by extensive research and development work due to less defined requirements may increase contractor performance risk and drive the extent to which past performance and other technical factors are relied upon for contractor selection (FAR, 15.101).

Traditional federal source selection processes operate along the best value continuum which includes Tradeoff and Lowest Price Technically Acceptable (LPTA) award approaches. “A tradeoff process is appropriate when it may be in the best interest of the Government to consider award to other than the lowest priced offeror or other than the highest technically rated offeror” (FAR, 15.101-1(a)). When utilizing the tradeoff process,

all evaluation factors and significant subfactors that will affect contract award and their relative importance shall be clearly stated in the solicitation; and the solicitation shall state whether all evaluation factors other than cost or price, when combined, are significantly more important than, approximately equal to, or significantly less important than cost or price. (FAR, 15.101-1(b))

The tradeoff process allows a mechanism for the government to justify paying a higher price so long as the actual or perceived benefits are warranted and the rationale is properly documented in the contract file (FAR, 15.406).

The LPTA approach is utilized when the government reasonably expects the best value to be obtained from the lowest evaluated price offeror. Solicitations in which LPTA is utilized clearly present “evaluation factors and significant sub factors that establish requirement of acceptability” (FAR, 15.101-2(b)(1)). Additionally, “Tradeoffs are not permitted and proposals are evaluated for acceptability but not ranked using the non-cost/price factors” (FAR, 15.101-2).

9. Conclusion of Contract Planning

It is imperative that federal employees and particularly contracting and acquisition professionals have a working knowledge of the federal procurement process. The FAR identifies standardized practices and procedures as well as uniform regulatory requirements that promote best value to the government and taxpayer while ensuring fair and equitable treatment of government suppliers. There are a multitude of contract types and procurement vehicles at the KO's disposal as well as various funding and procurement processes that have direct implication to government response to CONUS natural disaster and emergency response efforts.

D. LITERATURE REVIEW CONCLUSION

In this chapter we provided the background and a broad view to understand what a disaster is and the tools and resources available for planning and response. We then examined published research, government reports, after action operational reports, statutory language, DoD policies, doctrine, and frameworks in order to gain an understanding of the current CONUS disaster environment. We first studied the construct of a disaster, what it is and how it is planned for and responded to. Next, we examined the statutory tools available at the federal level through the Stafford Act and the NRF. Then we presented how the DoD plays a pivotal coordinating role within the Executive Branch. Finally, we provided an overview on the CONUS steady state and contingency state federal contracting protocol through the FAR and DoD policy.

In chapter III, Analytical framework and methodology, we provide an in-depth analysis of various frameworks and models currently within the DoD portfolio. These models provide the backdrop for critical DoD preparedness and contingency response capability and based on our research, demonstrate significant potential and suitability for CONUS disaster response operations. Finally, we offer case study analysis of the 2017 hurricane season with particular emphasis on federal contract support and subsequent inefficiencies with respect to Hurricanes Harvey, Maria and Irma.

III. ANALYTICAL FRAMEWORK AND METHODOLOGY

A. INTRODUCTION

In this chapter we discuss a series of analytical frameworks and models currently utilized across the DoD as outlined in JP 4–10 and other strategic documents. These models are critical in shaping the DoD’s preparedness and contingency response capability. We contend that these models are suitable to not only contingency operations but if utilized correctly, can significantly enhance CONUS emergency management and disaster relief efforts. Our primary focus throughout this chapter is to provide a consolidated outline of these analytical models and demonstrate the potential for the JP 4–10 and Phase Zero model’s application and utilization across the federal government disaster response portfolio. Additionally, we provide case study analysis of the 2017 hurricane season with a focus on Hurricanes Harvey, Maria and Irma and briefly outline their level of impact and subsequent federal contracting inefficiencies throughout the response and relief efforts.

B. MODELS

1. Yoder Three-Tier Model (YTTM)

The YTTM architecture addresses critical gaps in current contingency contracting operation support primarily in the areas of integrative planning and execution (Yoder, 2004). It is designed to support major contingency operations, which are traditionally comprised of multiple phases depending on the stage or level of maturation of the declared contingency. While the YTTM design is tailored to support contingency contract support operations, the fundamental components are suitable for implementation into the CONUS disaster and emergency management response arena. The traditional contingency operation phases are as follows:

- Phase I: Mobilization and Initial deployment occurs within the first 30–45 days of operations and contract engagement is often related to providing the fundamental life support and security items such as food, water, shelter and security (Yoder, 2004, p 10).

- Phase II: Build-Up and Stabilization occurs around the 45+ day mark and is characterized by providing continued life support and security requirements while introducing additional priority toward construction and maintenance, quality of life items, solidifying a vendor base as well as greater emphasis on contract control and administration amongst others (Yoder, 2004, p. 11).
- Phase III: Sustainment (Post-buildup until Termination) is indicative of peak operation maturation and resembles state-side operations. The sustainment phase may last years and contract processes, procedures and operations are robust and standardized. Specific contract support features of this phase might include improving upon internal controls, further promoting vendor competition, as well as establishing creative contract solutions to achieve efficiency such as IDIQ type contracts (IDIQ) or BPAs. (Yoder, 2004, p. 11).
- Finally, Phase IV: Termination and Redeployment utilizes the continued importance placed from Phase III and incorporates required functions to cease operations in a methodical manner. These include packing and freight management, contract termination and closeout, and exit strategy development and processing (Yoder, 2004, p. 12).

The YTTM, at its core provides a framework for the efficient and effective utilization of contingency KOs in order to deliver maximum effect to the Combatant Commander (CCDR). This tiered architecture is composed of three implementation models; each providing unique and independent functionality and requiring minimum education and skills set requirements (Yoder, 2004).

The foundation of the YTTM is comprised of the Ordering Officer Model, which at its core includes basic contract functionality including Task and Delivery Order placement against theatre-wide contract vehicles (Yoder, 2004, p. 14). This model is fairly basic by design and can be successfully implemented by personnel with modest contracting expertise.

The second tier, Leveraging Contracting Model, is best suited for more experienced contracting and acquisition professionals and introduces contract capabilities and solutions that extend beyond those delivery and task order vehicles present in the Officer Ordering Model. More strategic in application, the Leveraging Contracting Model allows for engaging local and regional firms, higher service authorities and Non-Governmental Organizations to leverage buying power and exploit potential economies of scale as well as craft more robust internal processes and controls (Yoder, 2004, p. 14).

Finally, the third and most sophisticated tier is the Integrated Planner and Executor (IPE) Model which sees seasoned contracting professionals inserted into the operational planning aspect of the contingency environment. Often this occurs in advance of actual troop and resource deployment and carries over into contract operations (Yoder, 2004, p. 15). This success of this model is predicated on the employment of highly educated and experienced contracting professionals capable of integrating strategic level acquisition strategy and applications across the spectrum of contingency operations to meet National Strategic and theater objectives. The proper planning, integration, and execution of acquisition and contract solutions in support of contingency operations is critical and serves as a valuable asset for the CCDR. This level of responsibility as well as operational and theater-based planning expertise is uniquely suited for only the most seasoned acquisition personnel (Yoder, 2004, p. 16).



Figure 15. Contingency Contracting—Achieving Better Results. Source: Yoder (2004).

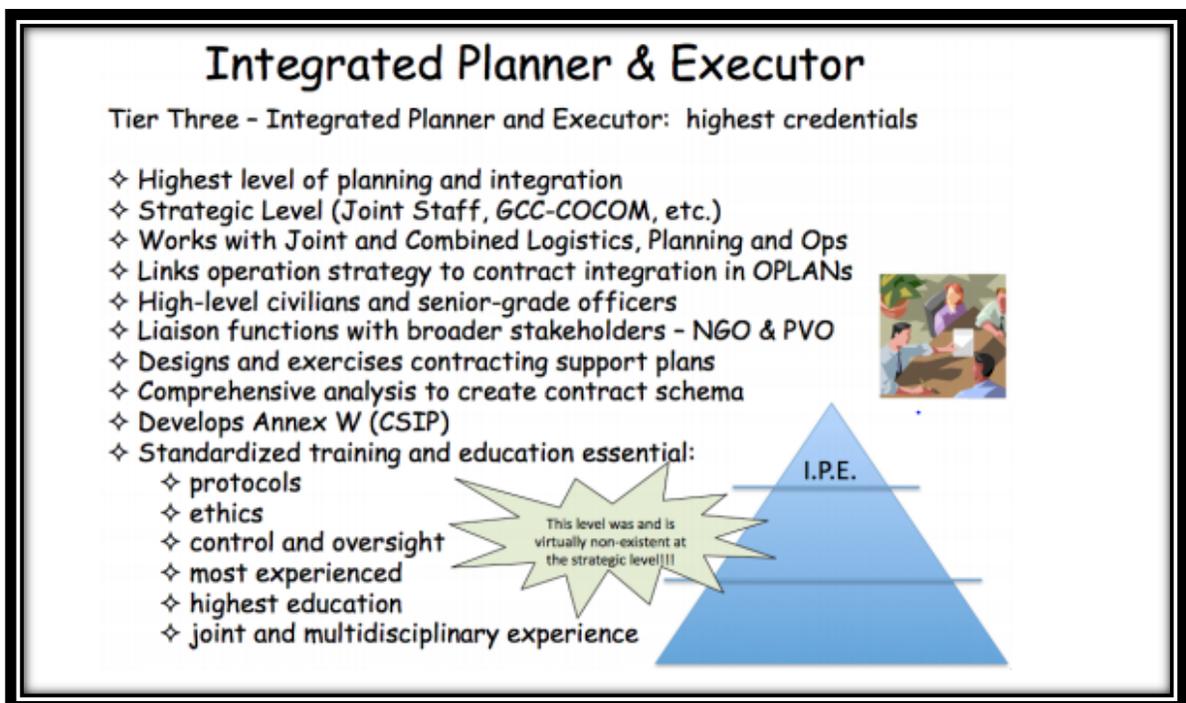


Figure 16. TTM—Tier Three—Integrated Planner & Executor. Source: Yoder (2004).

The YTTM has implications beyond contingency contracting in support of military operations. In fact, it is our contention that this model has the potential to exponentially

improve the manner in which acquisition, contracting and logistics support is achieved with respect to domestic CONUS natural disaster and emergency response. In subsequent chapters of this document we will discuss in some detail how the YTTM, in conjunction other frameworks can be a powerful model for providing expedient and effective contract support for CONUS emergency and natural disaster response.

2. Yoder Three Integrated Pillars of Success (TIPS)

Embedded within his PZCO concept, CDR (Ret.) Cory Yoder, faculty member at NPS and one of the foremost authorities on federal contingency contracting, details the need for strategic contracting integration across three Mandatory Pillars to ensure operational effectiveness (E Cory Yoder, Long, & Nix, 2012). The Pillars are comprised of Personnel, Platforms and Protocols as illustrated graphically in Figure 17:

- Pillar I: Personnel is addressed through the proper implementation of the Three-Tiered model construct previously identified with particular respect paid to the IPE category. Contracting across this pillar relies on the contributions of experienced KOs capable of integrated contract and operational planning and execution in support of theater and CCDR objectives (Yoder et al., 2012, p. 27).
- Pillar II: Platforms is satisfied through the strategic integration of contracting activities across the myriad phases of military operations with further incorporation into current warfighter's platforms centered around planning and execution, for example the Adaptive Planning and Execution System (APEX) (Yoder et al., 2012, p. 27).
- Pillar III: Protocols is centrally focused on procedural guidance pertaining to sound business strategy, military doctrine and existing or desirable rules necessary to oversee essential contracting planning working in concert with the Operational Plan at large (Yoder et al., 2012, p. 27). This pillar encompasses a number of strategic planning documents to include JPs 4–

10 (Operational Contract Support), 5-0 (Joint Operational Planning), 4-0 (Joint Logistics) as well as others (Yoder et al., 2012, p. 28).

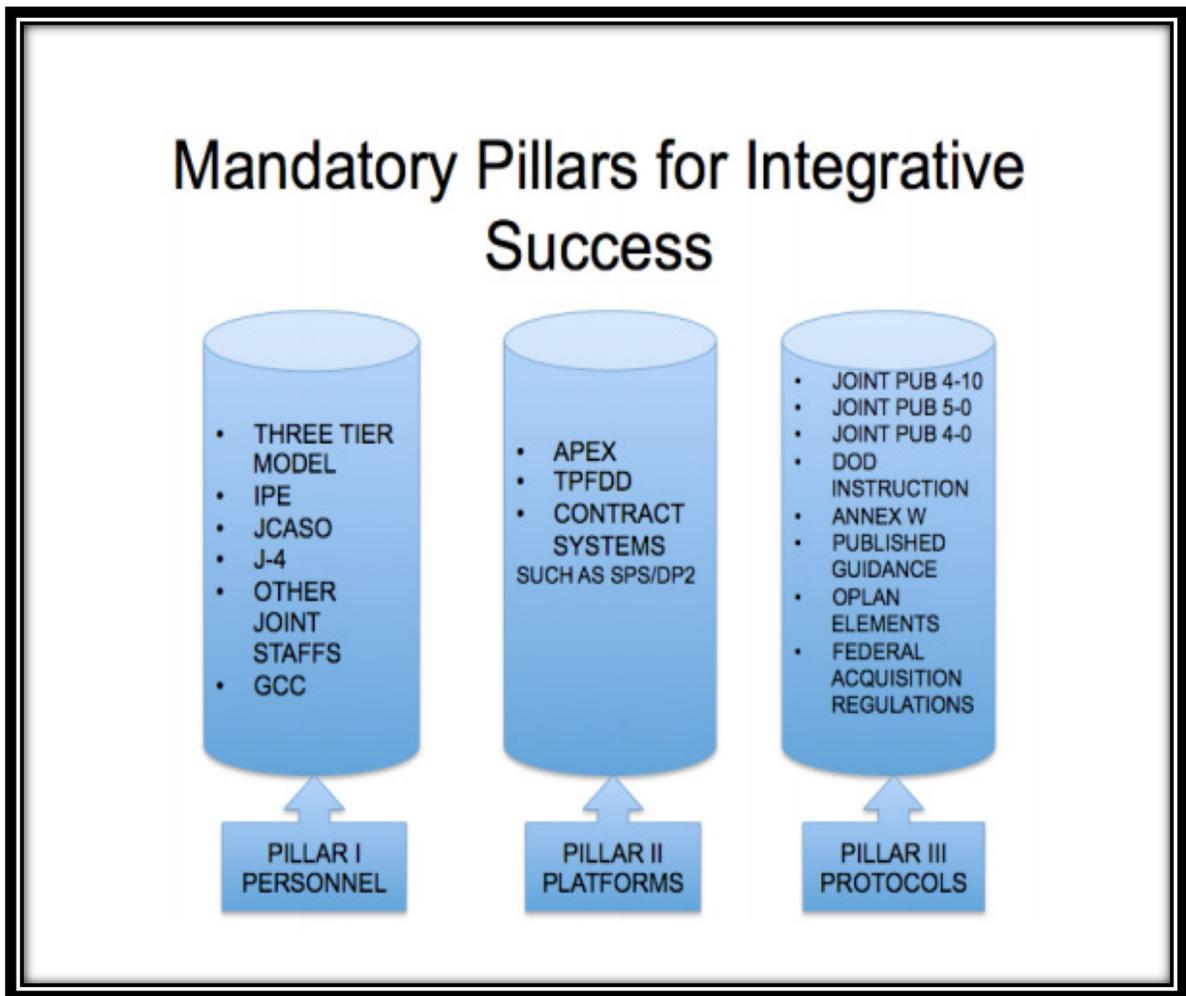


Figure 17. Mandatory Pillars for Integrative Success. Source: Yoder et al. (2012).

3. Phase Zero Contracting Operations Model

In the context of contingency contracting, Phase zero contingency operations encompass the planning, exercising and rehearsal of a myriad of operational and support activities necessary to respond effectively to emergency situations (Yoder, Long, & Nix, 2013). Embedded within PZCO are these same fundamental components of advanced planning, realistic exercising and rehearsal of wide ranging contract support components

necessary to provide expeditious and effective contract solutions when required (Yoder et al., 2013). The ability to provide efficient and effective contract support during a contingency or crisis situation is predicated upon robust planning and preparation activities. For example, properly establishing and vetting contracting plans prior to contract engagement in support of contingency operations or establishing proper contract vehicles capable of fulfilling critical commodities and service requirements expeditiously.

The Phase Zero Operations model has been embraced by the OCS community and has by all accounts revolutionized those “shaping” or preparation activities design to ensure efficient contract support leading up to and during contingency operations (Yoder et al., 2012). In fact, the Phase Zero concept has been so well received that it, along with the design and implementation of OPLAN Annex W, has been integrated into the 2008 Defense Authorization Act as a mandatory component (Francis, 2011). It is paramount that contracting plans be properly formulated and solidified prior to a contingency event. Despite this, anecdotal evidence suggests that there is significant lack of deliberate, integrated rehearsal and strategic planning activities in place across the spectrum of GCC OPLAN Annex W support plans presently. Experts suggest that this is largely due to budgetary limitations and increased operational tempo however, as experienced in both Iraq and Afghanistan, the initial costs of proper planning are negligible when compared to those costs associated with poor strategic planning, rehearsal and execution (Yoder et al., 2012, p. 12). The Phase Zero concept is achieved through the deliberate and integrative utilization of the YTTM as mentioned previously.

There is an overwhelming amount of information that suggests military planning and execution guidance is still absent strategic contract integration. This is despite recent efforts to deliberately inject contract policy including the 2007 Gansler Report: *Urgent Reform Required* as well as JP 4–10, which outline both the critical nature of contracting operations as well as their role within the strategic contingency planning and execution environment (Yoder et al., 2012).

Consequently, this void results in significant loss of efficiency across contract activity in support of critical contingency engagement. The Phase Contract Operations Model provides a multi-faceted and deliberate approach capable of shoring up those

contract and logistics shortfalls that have long plagued strategic military leaders. By properly training, staffing and aligning contingency contracting personnel by way of the YTTM as well as ensuring the logical integration of contracting activity into the joint service community planning system, we are equipping the CCDR, leveraging our strategic contract capability to support the warfighter as well as properly executing taxpayers dollars (E Cory Yoder et al., 2012).

C. CONTRACTING FRAMEWORKS

1. Operational Contracting Support

OCS is defined in JP 4–10 as the “process of planning for and obtaining supplies, services, and construction from commercial sources in support of CCDR directed operations through the related contract support integration, contracting support, and contractor management functions” (Joint Chiefs of Staff [JCS], 2014, p. I-4).

JP 4–10 (2014) outlines that OCS planning and execution is built upon a programmatic approach on behalf of the Joint Force Commander (JFC), supporting CCDRS, and contracting organizations. OCS is built upon the following principles:

Contracted support can be a significant force multiplier, but it is only one of numerous sources of support to the joint force. The supported GCC and subordinate JFCs should judiciously consider the proper mix of different sources of support to include U.S. military support, multinational military support, host-nation support (HNS), and contracted support. Each of these sources of support has advantages and disadvantages that must be carefully weighed by the JFC and subordinate Service component commanders in order to determine the most appropriate source of support.

Most joint operations will include contracted support. While some limited duration operations, such as noncombatant evacuation operations, may use limited contracted support, all major operations will involve significant contracted support. This is especially true for major, long-term stability operations.

Contracted support is not restricted to logistic support; it may include significant non-logistic support as well. Non-logistic-related support capabilities can include linguist, signal, and private security contractor (PSC) services.

There are other non-monetary cost factors associated with contracted support that may not be readily apparent. Hidden, secondary nonmonetary OCS-related costs include, but are not limited to, inability to assign collateral or extra duties to contractor personnel; contract oversight responsibilities (i.e., COR and receiving official duties); security escort responsibilities, and other FP-related requirements. These factors should be carefully weighed when conducting OCS planning, especially in the risk assessment process.

Contracted support and its associated contractor management challenges must be integrated early in the operation planning process. Proper planning will integrate the contractor force into military operations and mitigate unplanned burdens on the joint force such as increased base camp services and FP requirements. The importance of such integrated planning cannot be overemphasized.

Phase 0 activities can have a significant impact on OCS in later phases of the operation. Consequently, OCS planners should be aware of and pay close attention to phase 0 activities that can provide critical information to support subsequent phases of the operation. Without such effort, OCS actions in support of these later phases of the operation can be much more difficult and potentially costlier.

OCS actions can have a direct strategic impact on civil aspects of the operation. While the most important factor of OCS is effectiveness of support to the military force, in certain operations the JFC may choose to utilize theater support and some external support contracts to provide a positive economic and social impact on the local populace. Additionally, the use of contracted support as an alternative to deploying U.S. support forces may have other benefits, including minimizing the military footprint in the operational area; reducing force operational tempo; and improving domestic U.S. political support or buy-in. This effort can be especially important in counterinsurgency (COIN) or long-term stability operations. (JCS, 2014, p. I-9)

The above explained principles provide the guide on successfully implementing OCS into any type of operation with the three key elements: Contract Support Integrations, Contracting Support, and contractor management. Figure 18 outlines the key requirements and functions involved within each function.

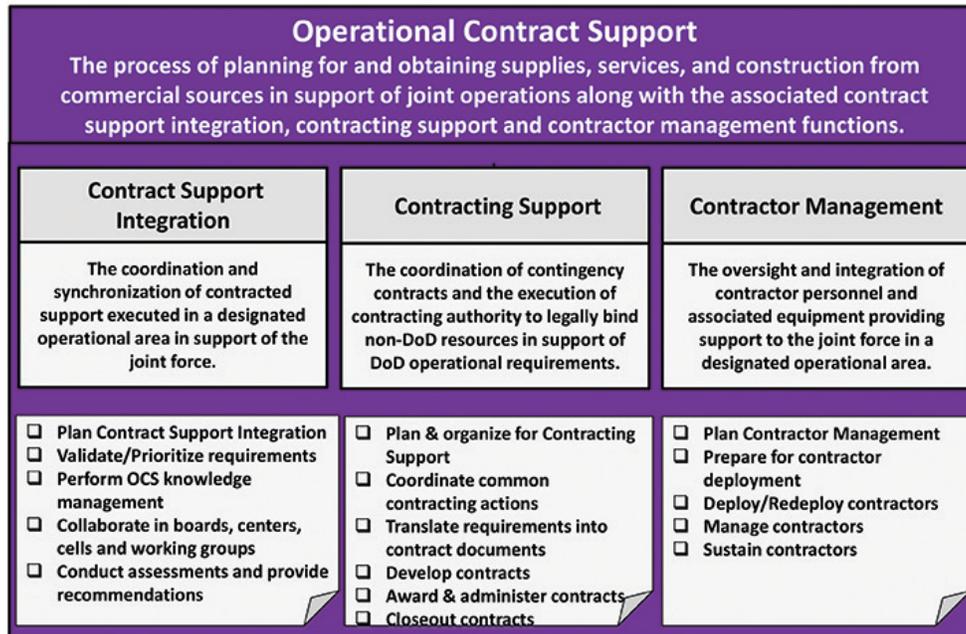


Figure 18. Operational Contract Support Elements. Source: Operational Contract Support and the Joint Force 2020 (2014).

The OCS framework’s usage is required through DoD policy and various NDAA. It is a framework that enable all stakeholders to properly plan contracting support operations in all environments. The planning that must occur prior to a joint operation such as a contingency event is the same that must occur in a disaster relief event. The coordinated lines of effort within the military’s Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities-Policy (DOTMLPF-P) analysis construct provide the keys to success.

D. CASE STUDY ANALYSIS

1. 2017 Hurricane Season

There is variety of data and anecdotal evidence that suggests federal contracting in the CONUS disaster and emergency response environment requires significant improvement. “A number of systematic failures in, and evaporating oversight controls of, the federal contracting process” (Amey, 2006) have been indicated by various agencies such as the Project on Government Oversight. These shortcomings have been directly

linked to “poor planning, inadequate competition, lack of overall accountability as well as minimal transparency” (Amey, 2006, p. 3) which have yielded disastrous effects during times of crisis such as Hurricane Katrina. FEMA, working in conjunction with a number of federal support agencies were tasked with recovery and relief efforts. FEMA has been heavily scrutinized based on their perceived inability to provide adequate and timely contract support. AARs have highlighted weaknesses in the federal government’s contracting systems that led to ineffective support operations to include: “a lack of planning and pre-established contingency contracts, excessive no-bid contracts, unreasonable prices and costs, and questionable expenses” (Amey, 2006 p. 8).

The 2017 CONUS hurricane season provides for an excellent case study in examining the federal government’s response to natural disaster and particularly, for the purposes of our research, highlights contract planning and execution successes and perceived failures across the various federal government response agencies. For the CONUS, and specifically Atlantic Seaboard, 2017 was marred by a number of hyperactive and catastrophic hurricane events. Regarded by experts as one of the most destructive hurricane seasons on record, we witnessed “Seventeen named storms, 10 hurricanes, and 6 major (Category 3 or stronger) hurricanes tear through the Atlantic Basin, well above the 30-year average of 12 storms, 6 hurricanes and 2 major hurricanes” (Belles, 2017). For the first time in recorded history two category 4 hurricanes hit the CONUS in the same season and another category 4 storm hit Puerto Rico which had not happened in some 85 years (GAO, 2018a).

Of the major hurricane events that transpired in 2017 we focus our attention to Harvey, Irma and Maria as they were among the most devastating in terms of quantifiable damage and destruction thereby requiring extensive local, state and federal assistance. In 2017, 19 federal support agencies had obligated nearly \$5.6 billion in contract support related to Harvey, Irma and Maria (\$2 billion for products and \$3.6 billion in support services as illustrated below) (GAO, 2018a).

We highlight in Figures 19, 20, 21 and 22 the event significance and federal contract response to these natural disasters, identify the role of FEMA and the DoD to

deliver critical support to the affected areas as well as pinpoint various levels of contract and acquisition inefficiencies and challenges that the government faced when attempting to provide critical goods and services in the wake of these events.

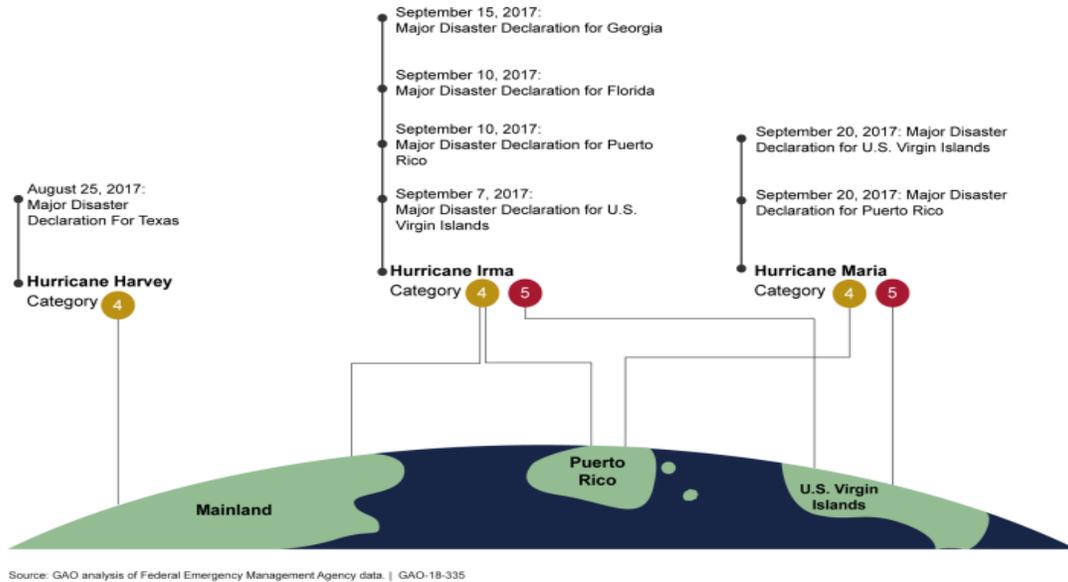


Figure 19. Timeline and Category of Major Hurricanes 2017. Source: GAO (2018a).

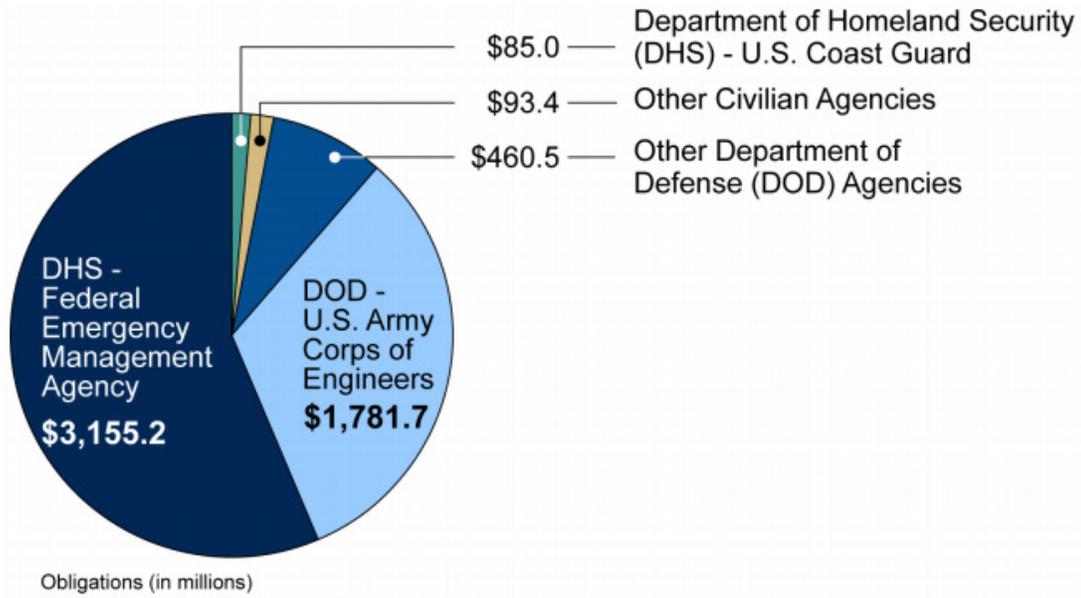


Figure 20. Contract Obligations by Top 10 Contracting Agencies in support of Hurricanes Harvey, Irma, and Maria through December 31, 2017. Source: GAO (2018a).

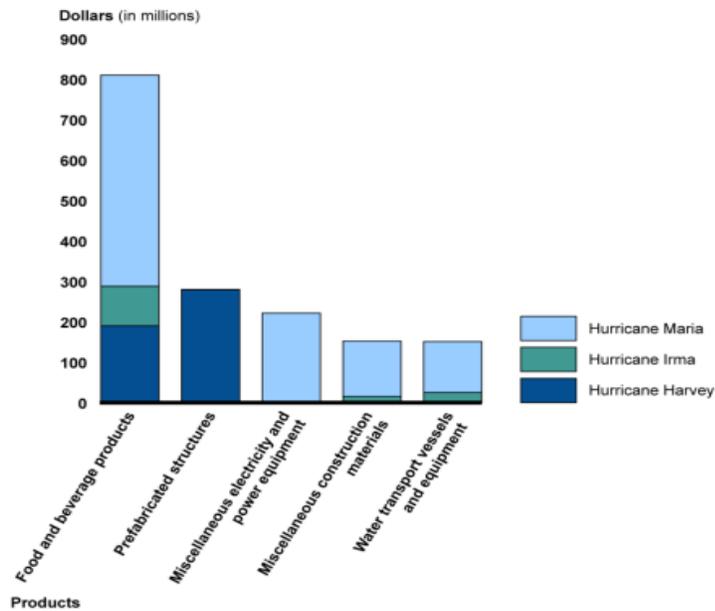


Figure 21. Top Five Product Groups in Terms of Contract Obligations by Hurricane. Source: GAO (2018b).

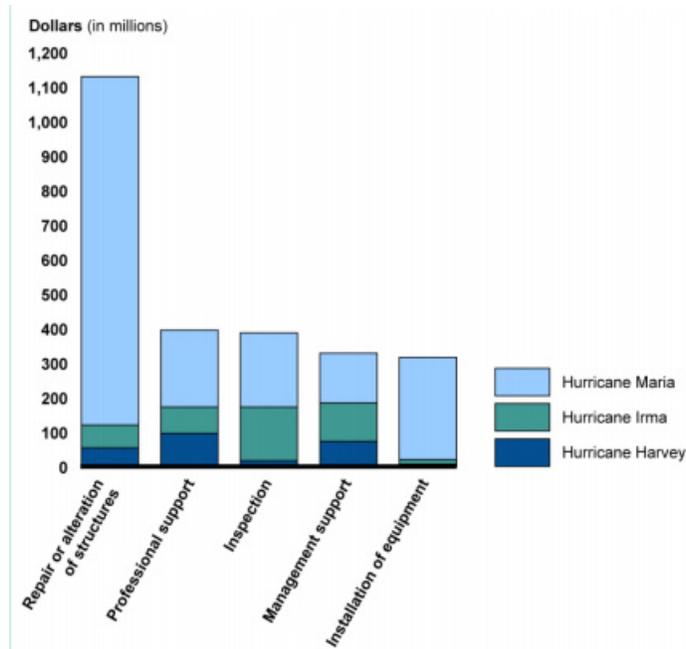


Figure 22. Top Five Service Groups in terms of Contract Obligations by Hurricane. Source: GAO (2018b).

2. Hurricane Harvey

On 25 August 2017, Hurricane Harvey made landfall onto the central Texas coast near Rockport producing winds upwards of 130 mph and continued on to impact parts of Louisiana, Tennessee and the Ohio Valley. All told, Hurricane Harvey remained in a tropical cyclone status for nearly 117 hours producing approximately 60 inches of rain, which was in fact over 12 inches higher than the record rainfall previously held, dating back to 1950 (Belles, 2017). Additionally, Harvey produced an exorbitant number of Tornados with estimates of 57 or more, further exacerbating the devastation that it caused in the southern United States. Hurricane Harvey is regarded as one of the most devastating and costliest natural disasters to ever hit the United States. Our research estimates the number of deaths associated with Harvey to be between 82 and 106 and total damage figures around \$125 billion.

According to the GAO report that captures 2017 federal contracting for response and recovery data, the federal government obligated nearly \$1.2 billion on contract support for Hurricane Harvey (GAO, 2018a, p. 16). Of the \$1.2 billion, FEMA spend represented

80% while DoD agencies including Defense Logistics Agency (DLA), the U.S. Army Core of Engineers (USACE) and the Department of the Navy accounted for nearly 14% of total contract obligations for response and recovery contract efforts. Spend analysis indicates a fairly even distribution between contract dollars obligated across goods and services--\$605 million on goods and \$624 million for services (GAO, 2018a). We have provided tables below that graphically illustrate the obligation breakdown by federal activity as well as the product/service distribution for additional reference.

Figures 23, 24, and 25 break down DHS and DoD contract spending obligations in support of Hurricane Harvey in 2017 through a total obligation and a detailed look at the top products and services utilized.

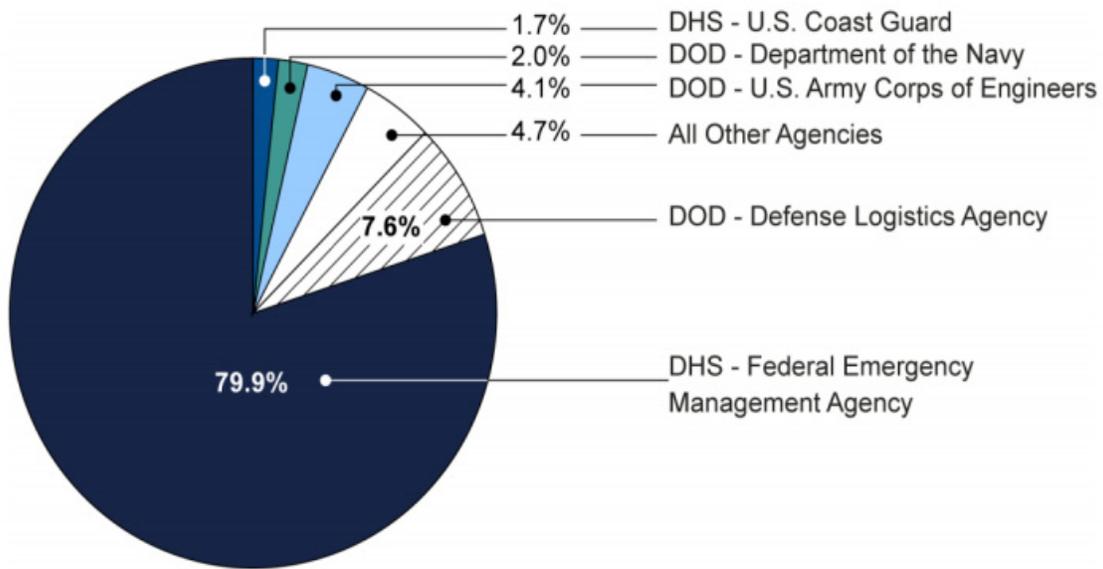


Figure 23. DHS and DoD Contract Obligations in Support of Hurricane Harvey. Source: GAO (2018a).

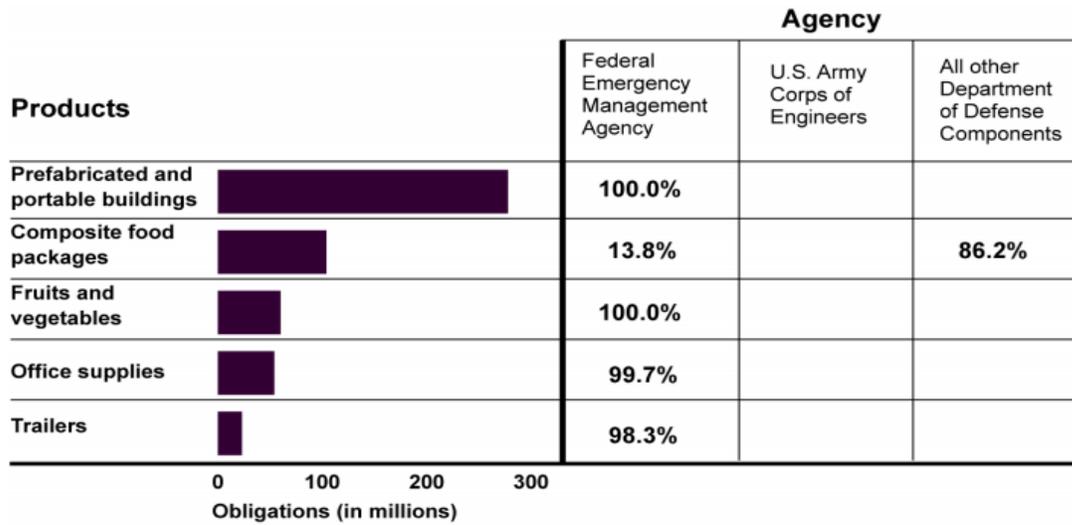


Figure 24. Top Products in Terms of Contract Obligations in Support of Hurricane Harvey. Source GAO (2018a).

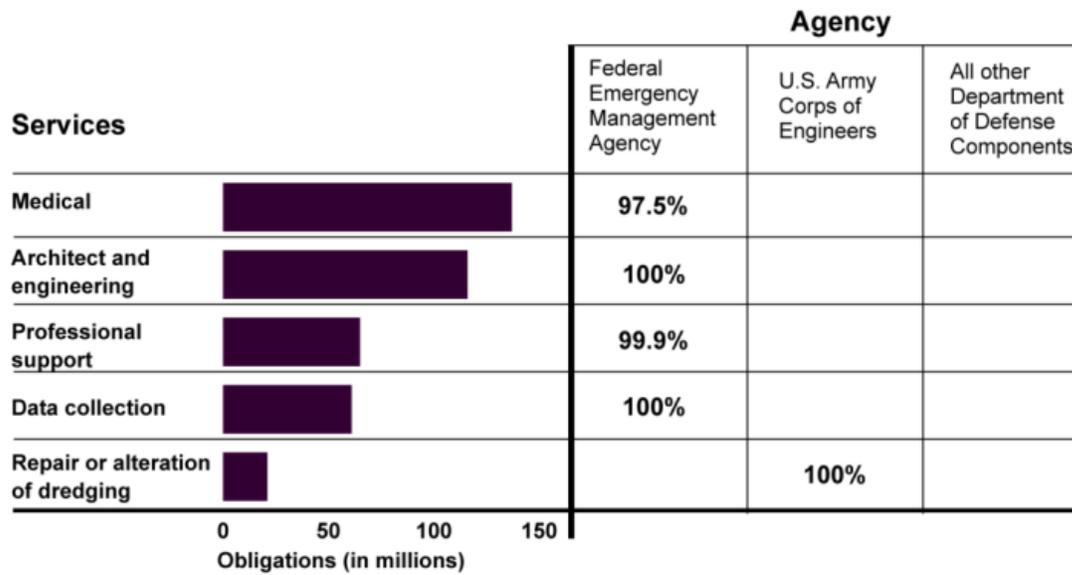


Figure 25. Top Services in Terms of Contract Obligations in Support of Hurricane Harvey. Source: GAO (2018a).

3. Hurricane Irma

Hurricane Irma has been considered the most powerful hurricane to hit the Atlantic seaboard in history. When Irma made landfall on the Leeward islands of Barbados on 6 September 2017 it was recorded as a category 5 storm producing winds of over 185 miles per hour and generating some 7 trillion watts of energy. The Barbadian and Antiguan Prime Minister determined Barbados to be inhabitable and President Trump approved an emergency declaration for Florida, Puerto Rico and the U.S. Virgin Islands (Amadeo, 2018). shortly thereafter. Irma went on to decimate parts of Puerto Rico, northern Haiti, the Dominican Republic, the Turks and Caicos Islands as well as portions of the Bahamas, Florida, Georgia as well as the Carolinas producing heavy winds and significant flooding.

As of 23 September, 2017, there were some 102 recorded deaths claimed by Hurricane Irma, 75 of which occurred in the state of Florida. Irma ravished Barbados inflicting significant damage to 90% of infrastructure, destroyed nearly all communication networks while displacing 60% of the population (Amadeo, 2018). In Florida, 6.5 million people were evacuated \$1.2 billion in produce was damaged. All told, Irma has been classified as the fifth costliest storm in American history with damage and lost productivity estimates between \$150 and \$200 billion.

According to the GAO, by the end of 2017 federal contract obligation estimates exceeded \$964 million in support of response and recovery activity. DHS and FEMA accounted for 75% of total contract obligations while the DoD, DLA, USACE and the Navy represent around 18% of obligations in support of Hurricane Irma (GAO, 2018a, p. 18). Of these total obligations, \$234 million were for product while \$729 million were designated for service contracts. These range from food, water, and fuels to inspections, repair and infrastructure alteration. The top 5 products and service and their respective composition is illustrated below.

Figures 26, 27, and 28 break down DHS and DoD contract spending obligations in support of Hurricane Irma in 2017 through a total obligation and a detailed look at the top products and services utilized.

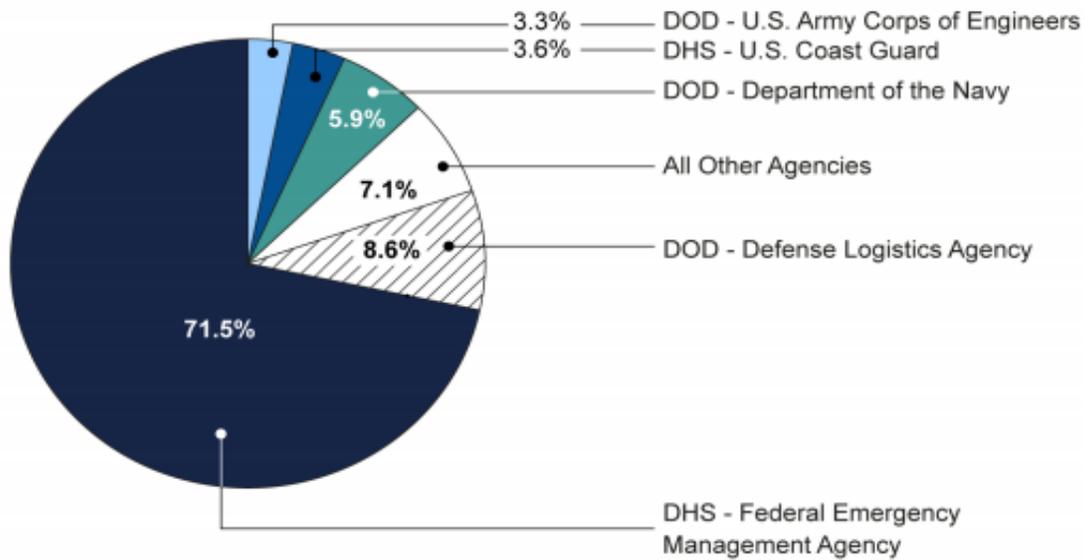


Figure 26. DHS and DoD Contract Obligations in Support of Hurricane Irma. Source: GAO (2018a).

Products	Agency		
	Federal Emergency Management Agency	U.S. Army Corps of Engineers	All other Department of Defense Components
Composite food packages			100.0%
Misc. ship and marine equipment	100.0%		
Transport vessels	100.0%		
Fuel oils			99.6%
Beverages, nonalcoholic	99.8%		

0 25 50 75
Obligations (in millions)

Figure 27. Top Products in Terms of Contract obligations in Support of Hurricane Irma. Source GAO (2018a).

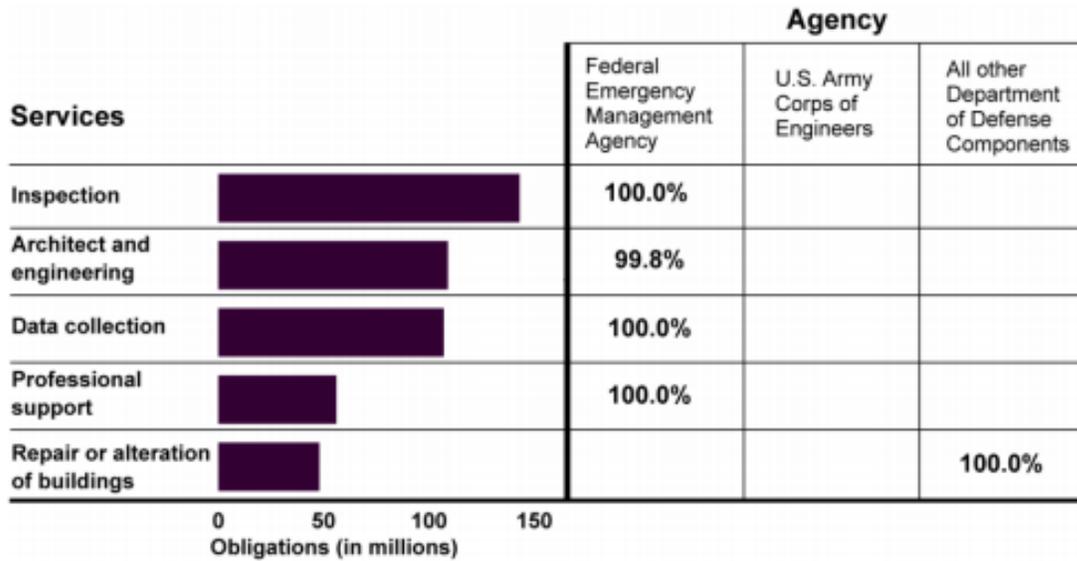


Figure 28. Top Services in Term of Contract Obligations in Support of Hurricane Irma. Source: GAO (2018a).

4. Hurricane Maria

Hurricane Maria made landfall in Puerto Rico and the Virgin Islands on 20 September, 2017 and was classified as a category 5 and 4 storms respectively. As mentioned previously, this was the second such storm of this magnitude to affect the U.S. Virgin Islands coming off the heels of Hurricane Irma only a few weeks prior and considered the worst storm to strike the island of Puerto Rico in over 80 years. Maria made landfall in the town of Yabucoa generating sustained winds of over 155 mph and crippled local infrastructure including weather stations, telecommunications and electrical grids as well as residential and commercial properties. Electricity was completely disconnected to the island and clean water and food was of limited supply. Extensive rain fall combined with gale force winds intensified the devastation producing over 30-inch-deep flood waters ridden with sewage and other toxic material (Schwartz, 2018). The independent data analytics and policy group, the Rhodium Group, indicates that Puerto Rico has lost over 3 billion customer hours of electricity and 80% of all power lines and generators were destroyed by the storm. They further claim that Puerto Rico will require over 6,500 miles of new power cable to reestablish power from what has been classified as the largest

blackout in American history (Goodkind, 2018). As of June 2018, some 9 months after the storm there were an estimated 6,000 utility customers still without power and significant repair still required for power grid restoration (Goodkind, 2018).

The cascading effects of Hurricane Maria have been devastating and have lasted for many months since the storm first made landfall. *The Washington Post* identifies A Harvard study published by the *New England Medicine Journal* indicates that the death count resulting from Maria is in excess of 4,465. This figure represents a stark contrast to original government estimates of around 64. The results of the aforementioned study point to health-care interruption for senior citizens as well as loss of utility services for the chronically ill as driving factors for the vastly higher death toll. Current estimates place the total damage associated with Maria somewhere in the neighborhood of \$90 billion which make it the third costliest tropical U.S. system since 1990 (Hernandez & McGinley, 2018).

The FEMA response related to Hurricane Maria has been declared as the longest sustained air mission for food and water for any such event in the organization's history. federal agencies combined to obligate approximately \$3.5 billion for contract support related to Hurricane Maria. Of the total obligation, the DoD and specifically USACE (United States Army Corps of Engineers) represent nearly 50% of total spend while FEMA has been credited with close to 43% (GAO, 2018a, p. 20). Contracts for products fall in the area of \$1.2 billion while service contracts have been estimated around \$2.3 billion representing some 65% of total spend (GAO, 2018a, p.21). Power restoration, repair, alteration and installation account for nearly \$1.2 billion of those service contracts further illustrating the significance of this endeavor. We have illustrated below the total obligation ratios as well as respective product and service composition as it pertains to total spend in support of Hurricane Maria.

Figures 29, 30, and 31 break down DHS and DoD contract spending obligations in support of Hurricane Harvey in 2017 through a total obligation and a detailed look at the top products and services utilized.

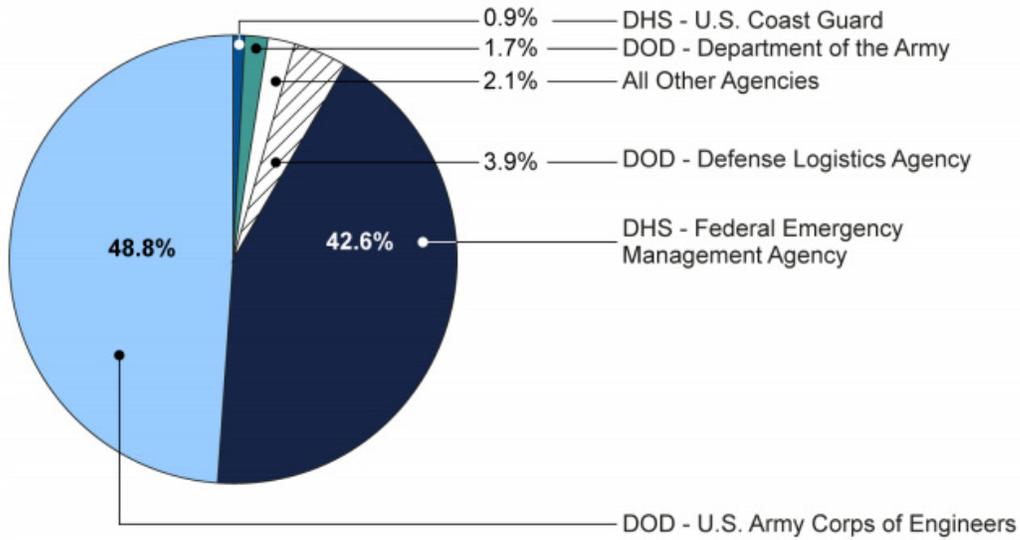


Figure 29. DHS and DoD Contract Obligations in Support of Hurricane Maria. Source: GAO (2018a).

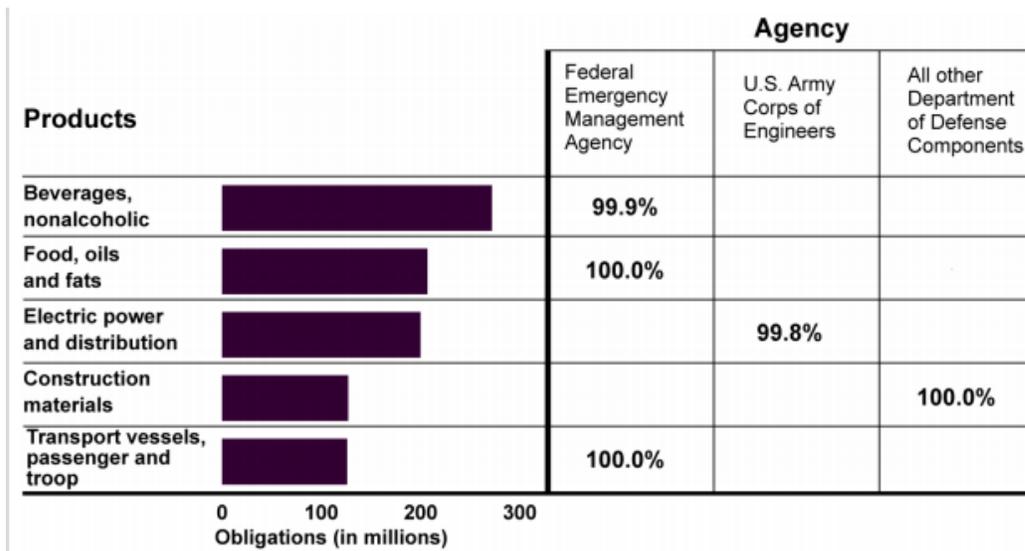


Figure 30. Top Products in Terms of Contract Obligations in Support of Hurricane Maria. Source: GAO (2018a).

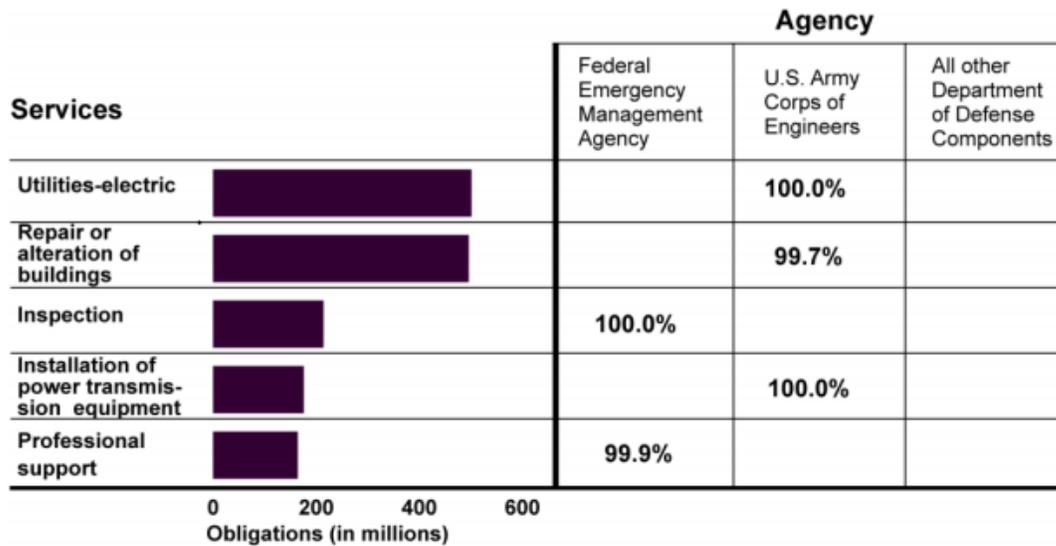


Figure 31. Top Services in Terms of Contract Obligations in Support of Hurricane Maria. Source: GAO (2018a).

5. 2017 Hurricane Season Federal Contracting

The 2017 hurricane season represents one of the most devastating and costly on record affecting some 25.8 million people with damage estimates near \$285 billion dollars. In February of 2018 The GAO conducted extensive data collection and analysis on the 2017 event season and published the study entitled *2017 Disaster Contracting: Observations on Federal Contracting for Response and Recovery Efforts*. In accordance with generally accepted government auditing standards and utilizing the Federal Procurement Data System-Next Generation (FPDSNG) system as well as direct engagement with FEMA, agencies within the DoD, USACE and federal officials at Joint Field Offices, the GAO was able to extrapolate meaningful data with regard to federal contract obligations across the major disaster events of 2017 with a focus on Hurricanes Harvey, Maria and Irma (GAO, 2018a). These multiagency coordination Joint Field Office locations include Austin, Texas; Orlando, Florida; San Juan, Puerto Rico; and St. Croix U.S. Virgin Islands (GAO, 2018a).

For the purposes of our research we evaluated these events and their respective response and recovery through the lens of direct federal contracting engagement. Of

particular interest was the preparation and response timelines for these events, competitive nature of contract obligations in theater, contractor performance as a direct result of pre-award contract planning activities and a host of other federal contracting related factors.

As previously mentioned, federal agencies by means of contract execution, obligated over \$2 billion for products to include food, water shelter and over \$3.6 billion for services such as power restoration and infrastructure repair (GAO, 2018b). While the FAR typically requires federal agencies to utilize full and open competition requirements when procuring goods and services, there are urgent and compelling circumstances that authorize the implementation of non-competitive acquisition procedures. According to the GAO, 73% of total obligations across the three hurricanes (Harvey, Maria, and Irma) were reported under competitive contracts. Figure 32 details that 74% of contracts within the first 90 days following landfall were awarded utilizing competitive procedures which represents a vast improvement over Hurricane Katrina which saw a 53% competition rate for the same time period (GAO, 2018b).

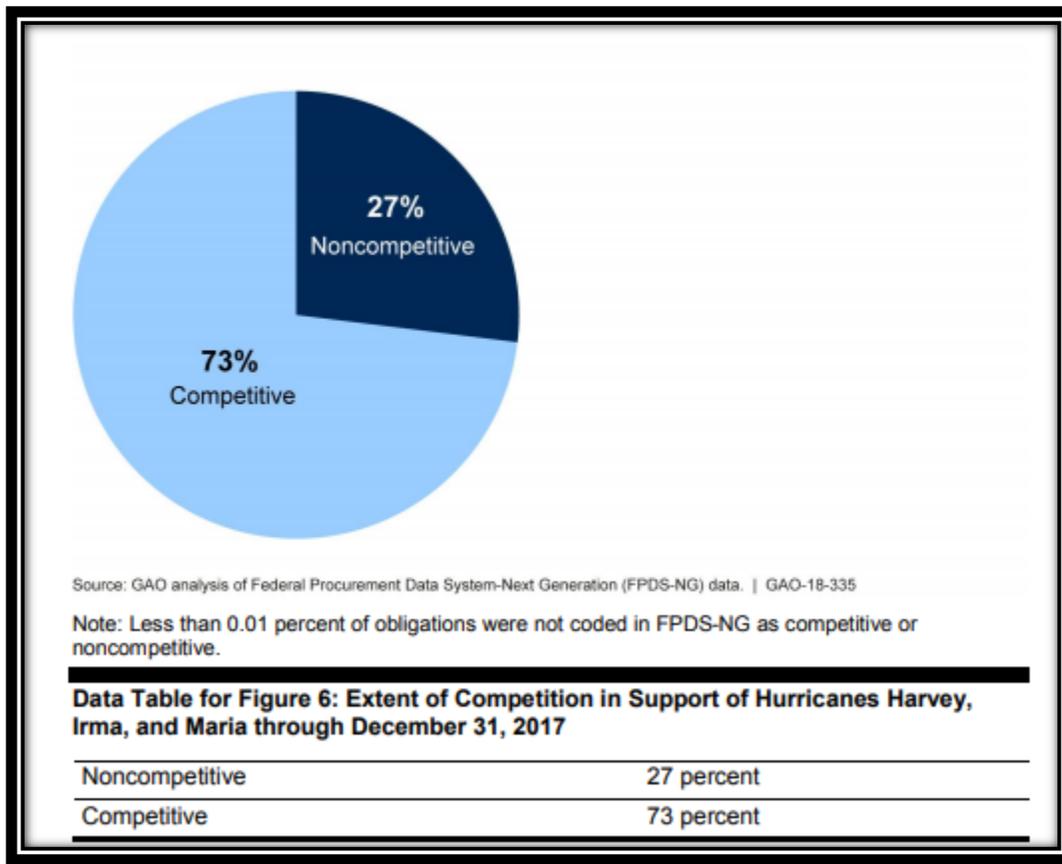


Figure 32. Extent of Competition in Support of 2017 Hurricanes.
Source: GAO (2018a).

The 2017 hurricane season federal response and recovery effort proved extremely challenging for a variety of reasons. The sheer volume of catastrophic events and short time duration between storms was devastating for a significant portion of the U.S. population. This was exacerbated by recruiting and retention challenges as well as manning shortfalls across federal response agencies to include FEMA, the lead coordination agency for CONUS disaster response and recovery. In 2017 FEMA faced immense challenges associated with the proper allocation and utilization of existing manpower. Before Hurricane Harvey made landfall in August of 2017, a large cross-section of FEMA personnel was deployed to various geographic locations in support of long-term recovery efforts. According to FEMA’s internal manpower analysis, this culminated in a 37% manning deficiency across FEMA and non-FEMA employees capable of deploying for

disaster response to include the Surge Capacity Force, FEMA Corps and contractors (GAO, 2018b, p. 89).

In addition to manning shortfalls, FEMA as indicated by their internal Qualification System was dealing with significant workforce proficiency issues during this same 2017 period. The Qualification designation in this context refers to personnel capable of performing specific roles and responsibilities necessary to deliver effective disaster response and support. FEMA officials have since indicated that manning shortfalls and a general lack of qualified personnel program experience has led to degraded mission effectiveness, particularly throughout the 2017 hurricane season. This was evidenced by the expressed concern of both local and FEMA officials in Texas during the 2017 season regarding FEMA's capacity and capability to respond to concurrent catastrophic disasters. Many federal response personnel who were initially deployed in support of Hurricane Harvey were later forward-deployed once Irma and Maria made landfall (GAO, 2018b). Again, these manning shortcomings were made worse by FEMA's struggle to deploy qualified personnel while experiencing varying levels of success in terms of surge and volunteer force allocation across multiple theaters.

Another key issue relating to the 2017 hurricane season centers on the number of federal contracts awarded to entities unable to meet cost, schedule or performance objectives and subsequently hampering the relief, response and recovery effort. A Homeland Security and Governmental Affairs committee, orchestrated by Senator Claire McCaskill, of Missouri placed blame on FEMA for failing to properly vet contractors, citing their inability to deliver critical supplies and services. Examples include multiple contract awards in the aftermath of Hurricane Maria for plastic sheeting and tarps which are utilized for a variety of reasons to include temporary infrastructure relief and roof repair. According to Eric Katz (2018) two such vendors Bronze Star and Global Computers and Networks received nearly "\$74 million in contract awards to provide 1,100,000 emergency tarps and 60,000 rolls of plastic sheeting." According to the Governmental Affairs committee these contractors had no relevant past experience at the time of award and were only recently established or registered to do business with the government a few months' prior. The committee also points to a general lack of due diligence on the part of

FEMA as well as the use of LPTA contract award criteria vs the best value tradeoff method as contributing factors leading to contractor default. Finally, the committee has argued that FEMA disproportionately utilized prepositioned advanced contracts for tarps and sheets obligating only 3.5% of total spend for these requirements against these contract vehicles (Katz, 2018).

One of the more widely discussed examples of poor contractor performance came in the wake of Hurricane Maria. In Avery Anapol's (2018) article, Tiffany Brown, the Atlanta based owner and operator of Tribute Contracting LLC was awarded a \$156 million contract by FEMA to provide 30 million meals in Puerto Rico. Brown did not have a designated staff and relied on a 11-member catering company to deliver the meals. On 19 October, the contract was terminated by the government citing Brown's inability to deliver the initial 18.5 million meals within the specified period of performance specified by the contract. In fact, Brown only managed to deliver a total of 50,000 meals and the contract was considered to be a logistical nightmare as indicated by FEMA officials (2018).

The underlying issue behind the inability of Tribute Contracting LLC to deliver required meals to Puerto Rico stems from a perceived lack of government oversight and inability to properly analyze past performance as indicator of future risk. The House Oversight and Government Reform Committee has been extremely critical of FEMA claiming that Tribute's past performance and general lack of large-scale disaster relief experience should have prevented the government from awarded the contract from the outset (Anapol, 2018). Tribute had previously defaulted on multiple government contracts and clearly lacked the financial and human resources necessary to deliver 30 million meals critical to Hurricane Maria victims.

In 2013 the Federal Prison System terminated a \$28,000 contract with Tribute due to inability to deliver food in a timely manner (Mariano, 2018). Also, in 2014, a Tribute contract to provide 3,000 Marine Core tote bags was terminated for default further illustrating a general lack of responsibility. Additionally, at the time of the FEMA award, the Government Publishing Office had an outstanding ban against Tribute for contracts in excess of \$35,000 due to poor performance, and lack of adequate financial resources (Anapol, 2018). It is paramount that the federal government conducts proper due diligence

to determine contractor responsibility and risk mitigation when awarding contracts for disaster relief efforts.

There has been much speculation and perhaps a general sense of frustration in terms of the response and recovery efforts on the part of the federal government with FEMA shouldering the lion's share of the blame. Our rationale for case study investigation of the 2017 hurricane season was primarily centered on collecting and analyzing recent federal contract data (quantitative and qualitative) in order to fully understand the federal contract response, identify any perceived or actual contract inefficiencies and to shape potential systematic contract solutions for future emergency and disaster events.

E. METHODOLOGY CONCLUSION

The analytical frameworks identified in this chapter bolster the DoD and federal government's ability to effectively posture for and respond to contingency and emergent operations. These frameworks provide for a level of strategic coordination and synergistic effect given their multi-faceted composition. We contend that these models demonstrate the potential for injection into CONUS emergency response and natural disaster capability portfolio and can significantly enhance the federal government's ability to plan and respond to catastrophic events ultimately leading to our ability to save lives and property. Finally, the 2017 hurricane Season case study analysis provides some recent historical context into the damage and destruction that natural disasters cause across the United States. This section also showcases the magnitude of federal contract application and execution as well as initiates the discussion of perceived and actual contract inefficiencies across these events.

In Chapter IV, Analysis, we apply a fundamental knowledge and understanding of key national frameworks, reports and analytical models to determine their potential for injection into the CONUS disaster response environment. To that end, we examined possible opportunities for the alteration and adaptation of DoD and other proven federal frameworks as a means of supplementing existing tools and resources for CONUS response. Additionally, we examined organizational personnel and training platforms within FEMA and applied YTTM and Pillars of Success criteria to showcase the

application of DoD Joint Concepts to CONUS disaster response lead agency objectives. Finally, we provide research findings that highlight multiple areas of integration we argue may enhance DoD and FEMA planning, response, and coordination efforts.

IV. ANALYSIS

A. INTRODUCTION

Using the literature review as the base of analysis and the understanding of key national frameworks, reports, and knowledge of disaster planning and response operations at the federal and local levels, we examined possible opportunities to alter current frameworks to include key processes from the Joint Doctrine with a proven track record of success within the DoD throughout contingency operations. Additionally, we examined the application and suitability of various frameworks to CONUS disaster response operations. Next we studied existing personnel and training platforms within FEMA and applied the YTTM and Pillars of Success to showcase what may occur in a holistic approach of applying DoD Joint concepts to FEMA operations. Our analysis highlighted two overarching areas where applying DoD concepts could improve FEMA planning, response, and coordination efforts at all levels: Integration of OCS into FEMA processes and the implementation of YTTM to disaster relief contracting operations.

B. HOW DOD JOINT DOCTRINE FRAMEWORK INTEGRATES WITHIN CONUS RESPONSE

As explained in Chapter III, OCS is a key process for military CCDRs designed to enable “planning for and obtain supplies, services, and construction from commercial sources in support of joint operations” (JCS, 2014). Contract planning and implantation is built upon a programmatic approach on behalf of the JFC. OCS is utilized predominately in OCONUS contingency planning environments. However, if the OCS framework in the OCONUS environment was applied and implemented into other executive level agencies, specifically, FEMA for CONUS disaster response operations, efficiencies and improvements to operations may occur.

The OCS principles applied to DoD contingency planning as outlined in JP 4–10, we believe can reasonably be applied within the NRF and FEMA operations to assist and increase CONUS response efficiency. Specifically: Phase 0 activities can have a significant impact on operations planning and execution. It is understood in Joint Doctrine

that planners must be aware of, and pay close attention to, Phase Zero operations. Key concepts include identifying life support requirements that may need to be contracted for and the ability to ensure contractors are responsible and capable of fulfilling said requirements.

Chapter III also outlined what the PZCO model entailed. Specifically encompassing the planning, exercising, and rehearsal of operational and support activities necessary to respond to emergency situations (E Cory Yoder et al., 2013). Joint DoD Doctrine further explains what occurs in PZCO is largely regarded as a shaping operation that will have impacts in later phases.

We contend that the framework of OCS activities, both Contract Support Integration and Contracting Support, could be adopted within the NRF and executed at the federal level outside of the DoD and within local jurisdictions. the “Contract Support Integration element coordinates, synchronizes, and executes contracted support requiring the planning, validating, prioritizing, and assessing of requirements” (JCS, 2014) this element provides a defined framework that could deliver a clarity of purpose. This element could be utilized during Phase Zero to enable FEMA and localities to plan for and have on call resources and capabilities traditionally required and already on contract.

Additionally, the element of Contracting Support allows for the “execution of contracting authority and coordination of contracting actions in support” which can legally bind commercial resources to perform. Within this element, the planning and organizing for contracting support occurs where the coordination of common contracting actions, the translation of requirements into contract documents, the development, solicitation, evaluation, and award of contract transpires. This element can be incorporated and executed by both FEMA and local jurisdictions in Phase Zero to meet the capacity that would be required in conjunction with the depletion of FEMA and local resources.

It is during Phase Zero planning and execution where federal and local authorities can properly assess their needs and receive contract proposals and bids. Furthermore, by incorporating OCS into the NRF and executing these actions in Phase Zero all parties have the ability to conduct thorough and proper market intelligence, spend analysis, category

management and host of other strategic acquisition planning activities to ensure that the best value is achieved while providing the proper resources to where they are needed while simultaneously ensuring fair and reasonable pricing.

Phase Zero is the contract shaping phase with DoD Joint Doctrine. It could be directly incorporated into the NRF and other federal and local planning frameworks to provide a basis of contracting for disaster response operations. It is within this phase that proper time is provided to the acquisition team in the planning process and to proposal evaluators to meet FAR requirements without having to rely on FAR 18 authorities. Starting the contract planning process early mitigates issues during actual response operations because needed contracts were not in place and enables acquisition professionals to conduct suitable contractor responsibility determinations to ensure suitability. During Phase Zero planning and execution, contracting authorities can establish and properly rationalize their supplier base for the performance of services and delivery of supplies when a response effort is required. This could prevent authorities from having to choose non-responsible contractors from a depleted vendor base because that is all that is left. Phase Zero planning and execution can enable federal and local authorities to conduct proper due diligence and ensure that requirements needed to sustain life and minimize property loss are postured and organized when needed.

C. WHAT OCS INCORPORATION INTO THE NRF COULD LOOK LIKE

We contend that the capabilities and planning protocols derived from DoD Joint Doctrine, specifically OCS can and should be added as a key and necessary function to the NRF. Although generated by the DoD, our research indicated that key and continuous contract functions are not included in its current configuration. We contend that FEMA could amend the current 2016 edition of the NRF into the Operational Planning section. As explained in Chapter II and depicted in Figure 3, the NRF is structured to achieve desired results in response operations. However, the federal government's response and action is limited due to funding and the need for a presidential declaration to actively get involved. Further, there is very little action before an incident occurs, then action is taken and then drawn-out. Our research has shown that hurricanes generally occur in the southeastern

United States and wildfires occur in the western United States, therefore we believe continuous contract planning is required to properly assist in response and recovery. The OCS framework is the proper planning tool to incorporate needed protocols between federal agencies and local authorities. In addition to the government response, the OCS Framework provides all entities within a community, private business, NGOs, community activities, Churches, and Non-profits an ability to be part of the response planning process. If all three OCS elements: contract support integration, contracting support, and contractor management were operating in a continuous cyclical fashion, with coordination occurring between federal and local contracting professionals of all agencies involved, we believe that many issues that typically arise would be headed off prior to contractor failure. Figure 33 shows how the cycle could be integrated with the NRF:

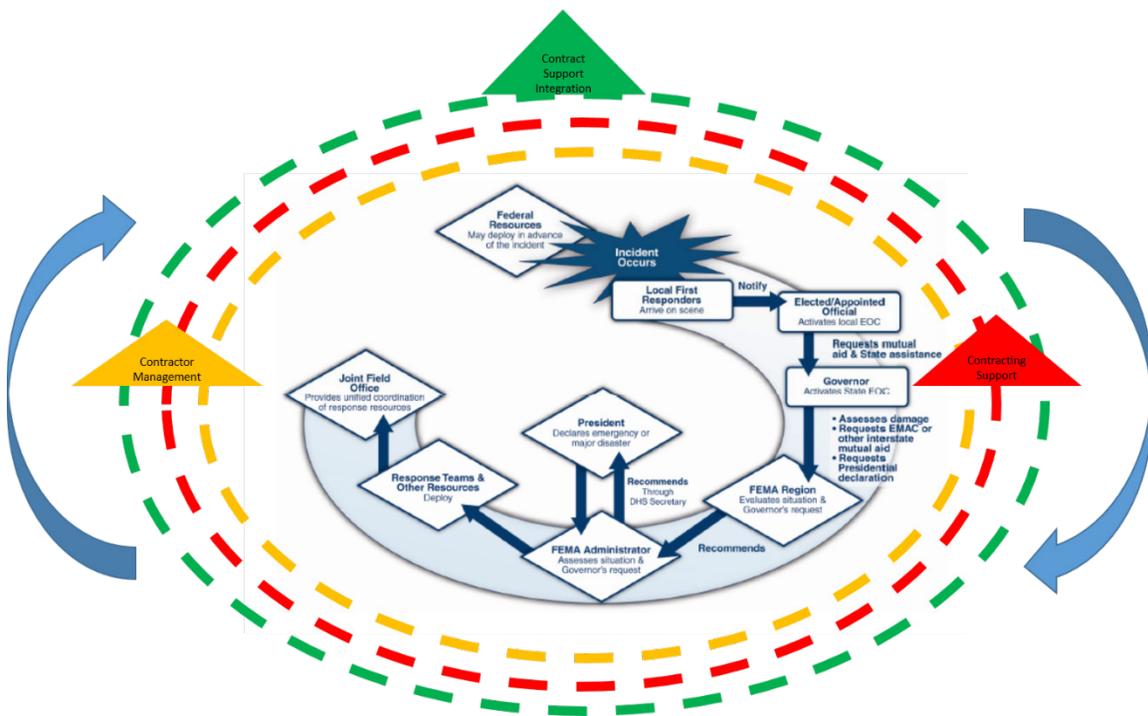


Figure 33. Modified NRF with OCS overlay. Adapted from FEMA (2016b).

Continuous planning of contract operations throughout the NRF declaration cycle enables federal and local acquisition professions to plan for required contract support

integration well in advance and maintain business and community relationships throughout long-term statutory limits. Furthermore, due to the ongoing nature of OCS, federal authorities at a minimum are able to validate and prioritize life support requirements that must be placed on contract. This would enable proper market research and intelligence to occur and prevent over saturation of known vendors while providing adequate timing to incorporate social economic programs to take part as well. As the contract support integration element is continuously being executed so is the contracting support element. This enables the coordination of life support commodities and services contracts based on a regional approach in coordination with local authorities to establish binding and non-binding contract vehicles to support what the local needs will require. Finally, this continuous integration further enables the development of a local and regional vendor base while enabling proper contract management to occur. Through the use of binding and non-binding contract vehicles, proper contract surveillance can occur.

By identifying and validating requirements, the collection and analyzing of market intelligence, establishing various contract vehicles, and conducting surveillance in a continuous manner, a modified NRF has the potential to reduce property loss and save lives.

D. YTTM APPLICATION TO CONUS DISASTER RESPONSE

The YTTM was designed to address the myriad of challenges that are innately associated with contracting in support of military engagement activities. Within Phase Zero Operations, the YTTM is centered around aligning critical KO and planning personnel to optimize the proper planning and execution of contingency contracting objectives (Yoder, 2004). While the YTTM was originally conceived as a means of providing CDRs with the necessary and efficient contract support required to achieve theater-wide military objectives, it is our position that this model has direct implications to the CONUS disaster relief and response arena as well. We will attempt to define the environment in which the YTTM was designed to support, provide additional insight into the YTTM model architecture as well as generally analyze its suitability and application across non-military, CONUS disaster relief and response operations.

Strategic planning and the efficient execution of contract support is paramount in achieving a desired end state within the contingency environment. Contingency operations are broadly defined as a singular event or combination of events that require the deployment of military forces and necessitate expeditious planning and response to safeguard personnel, installations and equipment. This includes, but is not limited to responding to disasters (natural, technological and humanitarian), terrorist activities, political instability or volatility and a variety of other military operations (Yoder, 2004, pp. 5–6). Furthermore, contingencies encompass the full range of war and military operations other than war (MOOTW) [now known as the range of military options (ROMO)] which may include major theater conflict, small scale operations, domestic and international disaster relief, peacekeeping and humanitarian relief efforts as well as nation building and various stability operations to name a few (Yoder, 2004, p. 6).

The YYTM provides for a robust manpower hierarchy across the strategic, tactical and operational organization levels, which consists of KOs and planning teams capable of optimizing the deliberate planning, coordination and execution of contingency operations. This model is predicated on the calculated orientation and utilization of well-credentialed contracting personnel to achieve mission optimization and stakeholder integration across the spectrum of contingency operations. While we have defined the three-tier composition (ordering officer, leveraging KO and IPE) in earlier chapters of our research, we feel it warrants reiteration that the three primary credential areas are training and education, certification and experience (Yoder, 2004, p. 15). These focus areas dictate how contracting professionals, operational planners, logisticians and a host of other contingency operations support personnel can be effectively utilized in support of contingency operations delivering enhanced capabilities to the CCDR.

The YTTM architecture is an extremely useful tool in the context of DoD contingency contracting operations and it provides a clear framework for how contracting professionals, across the operational, tactical and strategic organizational levels, should be employed. Tier one personnel, the ordering officer pool, function primarily at the tactical level and are charged with delivering contract capabilities through routine transactions and

basic ordering functionality (Yoder, 2004, p.14). This tier is largely comprised of junior civilians and uniformed service members.

Tier two personnel, the Leveraging Contracting Officer (LCO) pool, function at the operational level and deliver complex contract capabilities while are increasingly involved in integrative planning and leveraging economy assets across theater operations (Yoder, 2004, p. 14). This elevated tier demands increased responsibility and contract knowledge of personnel, placing considerable emphasis on protocols, ethical conduct, management as well as complex contracting expertise and business acumen (Yoder, 2004, p. 17).

Finally, Tier three personnel, the IPE pool, consists of those highly educated, skilled and experienced KOs who are not only integrated into operational planning activities but also execute contracting operations in support of National Strategic and theater wide objectives. This tier is reserved for highly qualified contracts professionals who are capable of leveraging integration objectives across a broad stakeholder portfolio consisting of military, Non-Governmental Organizations (NGO) and Private Volunteer Organizations (PVO) and others. Regarded as the most significant tier within this model, the IPE tier represents the strategic level of military and civilian organizational planning and execution and is reserved for flag officers and senior civilians with superior qualifications, certifications, skills, experience and expertise (Yoder, 2004, p. 15). The YTTM and its respective components is summarized in Figure 34 for additional consideration.

Model Tier Level & Model Title	Functions/Education/Rank	Highlights and Drawbacks
Ordering Officer—Tier One	<ul style="list-style-type: none"> • basic ordering • some simplified acquisitions • training: DAU CON 234 • DAWIA Certified CON Level I or II • junior to mid-enlisted, junior officers, GS-7 to GS-9 1102 series civilians 	<ul style="list-style-type: none"> • simple buys • little integration • no operational planning • no broad liaison functions
Leveraging Contracting Officer—Tier Two	<ul style="list-style-type: none"> • leverages to local economy • reduces "pushed" material support • training/education: DAU CON 234, recommended higher education • DAWIA Certified CON Level II or III • senior enlisted, junior to mid-grade officers, GS-11+ 1102 series civilians 	<ul style="list-style-type: none"> • better local operational planning • some integration • more capability for the operational commander • no planned theater integration • no broad liaison functions • may perform to optimize local operations at the detriment to theater ops
Integrated Planner and Executor (IPE)—Tier Three	<ul style="list-style-type: none"> • highest level of planning and integration—joint • linked/integrated with J-4 and J-5 • creates and executes OPLAN CCO strategy • provides direction to tier two and one • links operations strategically to theater objectives of COCOM • education: Master's degree or higher and, JPME Phase I and II • DAWIA Certified CON Level III, and other DAWIA disciplines (LOG, ACQ, FIN, etc) • senior officers (O-6+), senior civilians, GS-13+ or SES 	<ul style="list-style-type: none"> • performs operational and theater analysis, integrates results into OPLAN • link between COCOM and OPLAN to all theater contracting operations • coordinates theater objectives with best approach to contracted support • can achieve broader national security goals through effective distribution of national assets • includes planning, communication, coordination, and exercising with NGO and PVO in theater

Figure 34. Yoder Three-tier Model for Contingency Contracting Operations. Source: Yoder (2004).

The creation of the YTTM for optimal planning and execution of contingency contracting was derived from the increased reliance of contract support across the spectrum of contingency operations. The YTTM stands to meet those dynamic contingency integration, planning and contracting execution objectives of CCDRs and National Security Strategy personnel while concurrently influencing the theatre-wide coordination of key operational activities (Yoder, 2004). The DoD utilization of the YTTM, whether in theory or practice, brings us one step closer to achieving an efficient and effective coordinated response to execute CCDR intentions. The proper alignment of our most

critical resource, our personnel workforce, is paramount to delivering robust contract capabilities on time and on target.

While the YTTM in its current construct is tailored to meet the demands of the contingency environment, it is our position that this model can be retrofitted to meet the unique objectives of the CONUS disaster response and recovery environment as well. Executive agencies whether directly or indirectly tasked with disaster repose activities can adopt the YTTM core philosophies in terms of personnel management, utilization and training. FEMA for example, has placed a significant emphasis on their organizational structure as evidenced by their standalone Human Capital Strategic Plan 2016–2020, which aims to enhance recruitment, development and retention areas in order to prepare for catastrophic disaster. To this end, FEMA has concentrated its efforts on aligning its workforce to match its organizational structure and better meet mission demands (FEMA, 2016). Additionally, FEMA has attempted to foster an organizational culture that is grounded on innovation and learning while identifying core agency competencies (FEMA, 2016, p. ii). Other key focus area for FEMA, according to their Human Capital Strategic Plan, is leadership accountability and management practices and proper application.

Despite the renewed focus on organizational structure and manpower alignment, FEMA has faced significant personnel shortages and experience gaps in recent years which has increasingly hampered its ability to meet its agency objectives. In response to the 2017 hurricane season FEMA leadership has indicated that its “workforce was well understaffed, undertrained and ill prepared to respond at the beginning of the 2017 season.” In fact, between August and November of 2017, over half of FEMA’s specialized response and recovery teams were operating at 25% or less for periods of 45 days or more with 73% of response personnel deployed to disaster-affected areas (Ogrysko, 2018). FEMA also indicated that its internal workforce was woefully undereducated and fell well short of its self-imposed 80% disaster response and recovery certification target. These staff certification rates are outlined below.

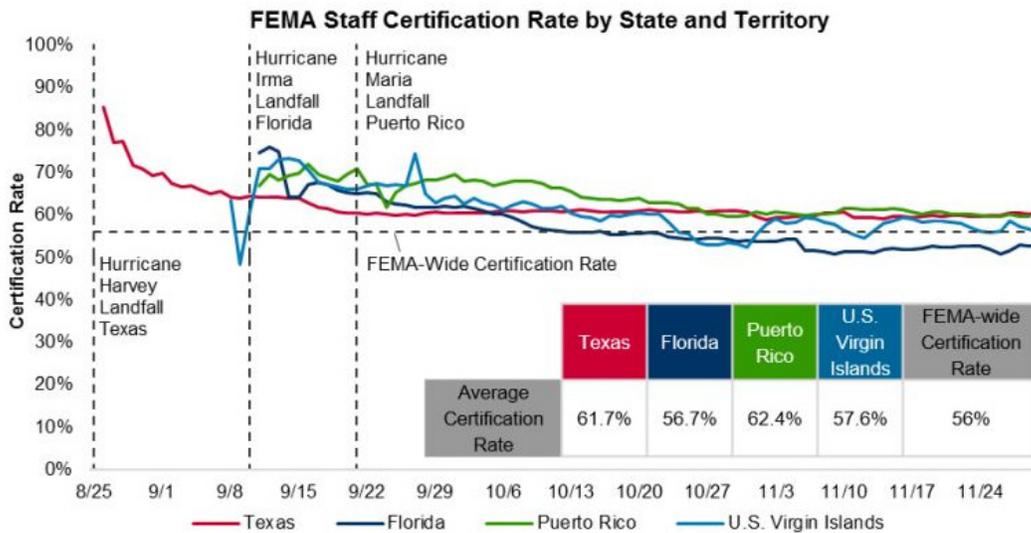


Figure 35. Certification Rate of FEMA Personnel Assigned by Hurricane. Source. FEMA (2018a).

These staffing and certification challenges that have plagued FEMA have necessitated the increased dependence on the Surge Capacity Force to deploy to disaster areas. This force, which is an all-volunteer group comprised of multi-agency federal employees, has been expanded significantly in recent years to include all cabinet agencies and not just non-FEMA and DHS personnel as it was originally constructed. In response to Hurricanes Harvey, Irma and Maria alone, the Surge Capacity Force increased by nearly 2,740 responders from eight DHS divisions and 1,323 employees from non-DHS activities according to FEMA and as illustrated below. All told, there were nearly 3 times the amount of surged personnel (4,063 non-FEMA employees) in support of these 2017 hurricane events than that of Hurricane Sandy. While the Surge Capacity Force is helpful in injecting personnel into field and support operations, there has been considerable debate as to the effectiveness and strategic utilization of these key personnel. FEMA after-action reports and field interviews have suggested that there are still opportunities for enhanced surge employee alignment and utilization citing that key leadership and management personnel from those non-FEMA and DHS agencies are not being advantageously employed in their surge capacity (Ogrysko, 2018). The misalignment of personnel and inability to match

those specialized knowledge, skills and abilities of a supplemental workforce leads to lost opportunities and wasted resources.

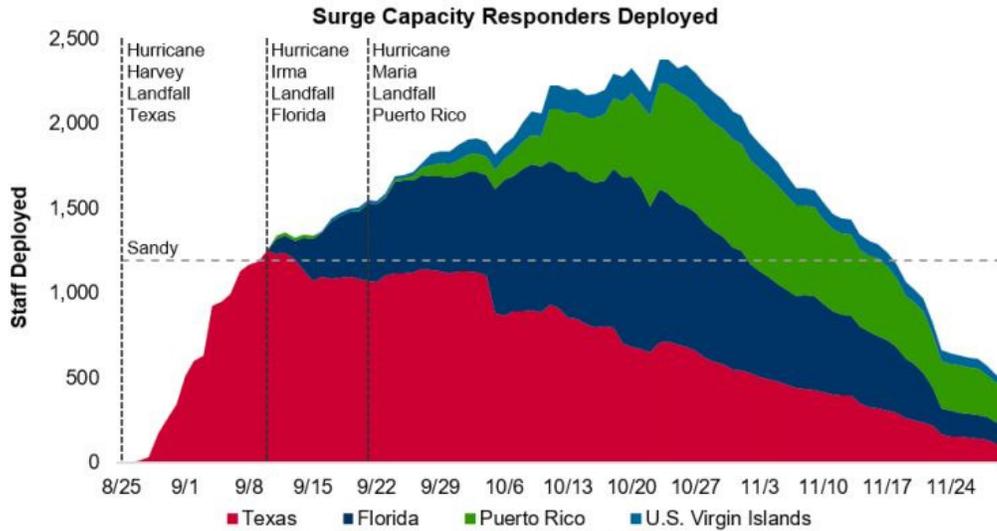


Figure 36. Surge Capacity Deployments for the 2017 Hurricane Season. Source: FEMA (2018a).

The YTTM, in the context of CONUS emergency management and disaster response, could be applied relatively seamlessly within FEMA and virtually all federal support agencies. This model would promote a more deliberate and strategic approach to human resource alignment and has the flexibility to extend beyond the contracting and acquisition workforce. It is our position that emergency planning and coordination should not be an afterthought. Taking inventory of existing personnel in terms of both volume projections and occupational specialties across the federal response landscape is vital to realizing the full potential of our workforce. The YTTM in its current configuration or perhaps a more tailored version for disaster and emergency response would provide a manpower framework to not only identify current capabilities but also provide a mechanism for recognizing personnel shortfalls and areas for improvement. This is especially advantageous for FEMA as they rely heavily on a surge capacity to supplement their workforce in times of crisis. They could adopt the YTTM and through collaborative partnership with their respective surge support agencies, develop a streamlined and

efficient manpower architecture that could exponentially improve response capabilities. Finally, the YTYM cascading structure with respect to education, training, experience and position would provide a clear and concise manpower hierarchy that could streamline operations both prior to and after event occurrence.

Recent history shows that while there have been great strides in enhancing our nation's ability to respond to emergencies and natural disasters, there is still significant opportunity for improvement. The 2017 hurricane season alone provides both anecdotal and imperial evidence to support this claim and we contend that federal agencies tasked with disaster and emergency response should be willing to adapt and evolve in order to meet the unpredictable and dynamic event requirements that will inevitably affect our nation in the future. While not necessarily a paradigm shifting concept to personnel management, the YTTM and the adoption of the Phase Zero Operations approach to planning and execution, could allow federal agencies to strategically develop, assign and allocate their respective manpower efficiently in order to ensure rapid and successful response in times of crisis.

E. CONCLUSION

This chapter presented our analysis based upon our understanding of national level disaster response frameworks, statutory reviews, established Joint DoD Doctrine and models, as well as AARs. We were able to identify that the DoD has established contracting protocols that are proven but are not necessarily utilized outside of the DoD. Although these protocols generally assist CCDRs in planning for contract operations in an OCONUS contingency environment -- they can improve existing efficiencies in FEMA's disaster response planning operations. By incorporating OCS into FEMA's planning operations and shoring up the vendor base throughout the disaster affected area, all prior to events occurring may enable first responders not to begin the acquisition and contracting processes until after a disaster occurs. Furthermore, understanding that FEMA has a shortfall of qualified acquisition professionals to plan for disaster response operations and ensure requirements are fulfilled as needed, the application of the YTTM could be instrumental to their future preparedness and ability to respond. FEMA relies on other

executive agencies to execute their emergency support functions; however, they would derive significant capability enhancement from the benefits outlined across all three tiers. This benefit has the potential to get the right resources to the right place at the right time in order to save lives and protect property.

In Chapter V, Recommendations, we provide a summary of our findings based on our research as well as provide recommendations and opportunities for further research.

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V. RECOMMENDATIONS

A. INTRODUCTION

The purpose of this chapter is to provide our final recommendations, based upon comprehensive research, to improve the CONUS disaster planning, preparation, and execution processes among all entities involved. Throughout our research, we wanted to examine key structures, documents, and processes to cross level knowledge from the DoD and apply it throughout the disaster planning and response operations. Throughout our MBA Project we provide the purpose, research questions, a literature review, key models and frameworks, and the final results of our analysis. This final chapter will present a summary of our research, identify our recommendations, and provide potential areas for future research.

B. SUMMARY

Many bureaucratic reforms have occurred since Hurricane Katrina impacted New Orleans in 2005. Hurricane Katrina highlighted the lack of preparation, coordination, and communication between federal and local authorities. Unfortunately, it took the loss of life and property to lead to statutory and structural changes within the federal government. However, time and time again it has been documented that federal agencies find themselves playing catch-up in the awarding of contracts during response operations. In their haste to catch-up and satisfy requirements and as a result of the lack of an integrated and coordinated processes, KOs potentially omit critical verification and evaluation steps prior to award. Ultimately, this lack of a coordinated process, as was seen in the aftermath of Hurricane Katrina, resulted in loss of life and damaged property and infrastructure. Looking at the 2017 hurricane season, it can be seen that coordinating and contracting process improvements have occurred since Hurricane Katrina. However, there is still work to be done for improvement.

The purpose of this research was to analyze how the DoD's contracting capabilities can increase efficiency in terms of planning for and responding to CONUS disaster response operations through a coordinated effort between local, state, and federal

authorities. We applied DoD contracting models and adapted them to existing federal frameworks to determine the best methods to improve processes for future response operations.

To conduct thorough research and answer our research questions, we sought key documents that drove federal processes. These documents included studying the NRF and Stafford Act while applying them to understand the complex aspects of disaster response and humanitarian logistics. As identified in these key documents, we utilized DoD operational and strategic aspects outlined in Joint Doctrine contracting and DSCA operations to guide this application. Once we identified the key documents and aspects required to answer our research questions, we applied the OCS and DSCA constructs, leading to our final recommendations.

C. FINDINGS AND RECOMMENDATION

1. Finding and Recommendation # 1: Integrate OCS into the NRF

Finding # 1: Throughout our research we found that FEMA's processes and contracting protocols are not sufficient for CONUS disaster response contracting operations. They operate in a reactive manner when they should be predicting, projecting, and planning for future requirements in the present tense. Commodities and services that are needed in the wake of a natural disaster are largely predictable. Furthermore, generally, natural disasters are cyclical in nature; there is a hurricane season, a snow blizzard season, and a wildfire season. These seasons require the same basic human needs each cycle. However, FEMA does not internally appear to have a sufficient quantity of qualified personnel to plan for, award, or manage these life support requirement contracts nor do they have adequate contracting processes in place. Although FEMA does not have the certification requirements such as the Defense Acquisition Workplace Improvement Act (DAWIA), they do have access the protocols when they are needed. Additionally, the DoD has established and tested contracting processes and associated protocols through OCS to include PZCO and YTTM that have been executed during contingency operations with proven results. The DoD constantly plans for the Range of Military Options (ROMO) to ensure preparedness. These process and protocols could prove very useful to FEMA's

CONUS operations. We contend that by adopting and integrating OCS and its associated principles and elements into executive level frameworks and coordination documents, FEMA can increase their contract planning, management, and effectiveness. Ultimately, through the utilization of OCS, FEMA may be able to get the required commodities and services where they need to be, when they are needed, ultimately saving life and property.

Recommendation # 1: In order to achieve contract planning and execution effectiveness, we recommend that DHS amend the Operational Planning section of the NRF and direct coordination amongst federal, state, and local emergency responders. This coordination effort should adopt DoD's OCS Framework and immediately implement its principles in conjunction with its processes and begin the contract planning and research portion immediately through FEMA's nine (9) regions.

2. Finding and Recommendation # 2: Amend the Stafford Act

Finding # 2: We have found that the Stafford Act, in general, provides the proper authorities from the federal government to state and local officials. The 180-page law provides in great detail the processes for declaring a presidential disaster and the steps for recovering from a natural disaster. Additionally, it is of credit to Congress for adopting and changing portions of the Act as necessary. In order to properly plan for a natural disaster response, adequate funding is required. The Stafford Act and FEMA resources go into clear detail on cost-sharing and mitigation grants available from the federal government to those affected at the center of the crisis. As the Stafford Act is the statutory authoritative document that drives all disaster events, the associated processes and funding is of great importance. In order to properly stage resources in partnership with federal, state, local, tribal, community, and private entities the authorization and authorities for resourcing must be available. Additionally, in order for FEMA to implement recommendation #1, integrating OCS into the NRF, is an all hands effort of the abovementioned entities. No entity operating in isolation can accomplish the planning, preparing, management, and execution of resources, and even more so, contracting support will be required to fulfill these capability gaps.

Recommendation # 2: We recommend that Section 307 of the Stafford Act is amended to enable contracts to be established prior to events occurring from within a FEMA region. Currently, Section 307(a)1 provides the requirement to contract with entities doing business in or residing in the affected area. We contend that in order to incorporate a proper planning process such as OCS, the language currently contained in Section 307(a)1 is restrictive. As mentioned above, natural disasters and crises are seasonal and predictable. Therefore, we believe that in order to successfully contract for and serve the citizenry affected, the language should be loosened to enable FEMA to establish a planning and execution construct within its pre-established regions. This will enable authorities to ensure the proper commodities and services are effectively and strategically postured. Additionally, we recommend that Section 322, Mitigation Planning, be amended to include specific language that federal, state, local, and tribal government authorities may consider contracts to fill capability gaps and can be established and managed in accordance with the FAR. This recommendation means that the identification of commodities and services be placed on binding contract vehicles for a base year plus option years at the local level in accordance with federal law prior to any disaster response occurring. We recommend that FEMA Mitigation Grants, as authorized in the Stafford Act, can be used to establish these plans and for response within FEMA regions. The execution of contract planning in phase zero will save lives and mitigate property loss, ultimately saving tax dollars on the back end.

3. Finding and Recommendation # 3: Contract Vehicle Solutions

Finding # 3: We found that FEMA, acting as the lead coordination agency for CONUS disaster response, is relied upon when state and local governments become overwhelmed by disaster and emergency events. FEMA provides critical coordination activities in support of CONUS disaster response and relief operations, though they often experience challenges with respect to the acquisition of supplies and services based on the environment in which they operate. Historically, FEMA has been criticized for insufficient response timeliness, inadequate prioritization of contract cost and price elements, requirements definition as well as contractor responsibility determinations and competition requirements to name a few. Furthermore, it is our position that while FEMA possesses

organic contract and acquisition capabilities, they have not established commensurate contract strategies and solutions to meet the unforeseen disaster and emergency events and conditions that affect our nation.

Recommendation # 3: We recommend that FEMA develop more robust organic contract capabilities with a particular focus on establishing regionalized IDIQs and other agile contract vehicles to complement their advance contracts already in place. This will promote improved vendor selection and reliability in the event of a natural disaster or emergency and also aid in the performance of proper contractor responsibility determination prior to an event occurring. Additionally, given the dynamic disaster response environment, FEMA and other executive agencies would see tremendous benefit from the strategic rationalization of their supplier base and consequently benefit from improved vendor performance. Furthermore, FEMA should adapt DoD frameworks for organizational configuration such as the YTTM, or some iteration as a means of shoring up manpower and capability gaps with respect to key contracting and acquisition personnel. This would allow for the deliberate development, effective assignment and strategic allocation of their workforce in order to ensure a more rapid and successful response during times of crisis.

D. AREAS FOR FURTHER RESEARCH

- Examine the effects of the establishment of DoD wide CONUS disaster planning cells organized in accordance with FEMA's regional structure. These cells could imbed within USNORTHCOM (Title 32) and provide overlapping capabilities while concurrently addressing unique geographic requirements in support of CONUS response.
- Should USNORTHCOM assume ownership of federal contracting support activities across CONUS? This centralized control and decentralized execution concept could promote greater standardization of processes and procedures while simultaneously promoting enhanced acquisition objectives such as spend analysis and category management in order to more effectively leverage the federal government's buying power.

- Should FEMA and other executive agencies tasked with supporting CONUS disaster response revamp their existing contracting capability portfolios, based on the lessons learned from recent disaster events and data analytics? Is there a more suitable role for DoD contract support within the CONUS disaster response environment to achieve synergistic effect with other support agencies?

E. CONCLUSION

Throughout this MBA Professional Report, we sought to utilize key skills and concepts developed throughout our educational program and apply them to real-life scenarios that occur frequently. As we developed our research questions, we sought to improve efficiency within the federal government in a way that could potentially lessen the burden on those effected by natural disasters year in and year out. We initiated this report by conducting an in-depth literature review focused on the key national level documents and processes responsible for the coordination of resources between all levels of government. We focused on the NRF and Stafford Act primarily because these documents provide critical guidelines, authorities, and processes to ensure that those effected by a disaster event receive assistance. Second, we looked at FEMA and DoD processes and doctrine for responding to disasters and focused on how the federal contracting process occurs within this process. Next, with the analysis conducted based on FEMA and DoD, coupled with statutory requirements and national level documents we analyzed the federal response during the 2017 hurricane season. Next, we applied tested and proven DoD contingency contracting principles OCS, PZCO, and YTTM and analyzed how the NRF could be improved if these models were adopted. Finally, we presented our findings and recommendations to improve CONUS disaster relief contracting operations in the pre-award phase. We believe, our recommendations could increase communication and coordination among all responsible parties. Additionally, these recommendations promote the proper stewardship of taxpayer dollars which if properly applied, could ensure the required life support commodities and services are delivered to the right place at the right time. Ultimately, we hope our recommendations can save a life and mitigate avoidable losses associated with natural and manmade disasters.

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