Doctrine for Domestic Disaster Response Activities

A Monograph
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ABSTRACT

DOCTRINE FOR DOMESTIC DISASTER RELIEF ACTIVITIES, by Major Dave Wellons, USA, 49 pages.

This monograph examines two disasters, Hurricanes Andrew (1991) and Marilyn (1995), and the U.S. Army's support to the Federal Emergency Management Agency (FEMA) to determine whether Joint and Army doctrine provides doctrinal tools for Defense Coordination Element (DCE) planning. Two recent disasters, Hurricanes Andrew and Marilyn, provide detailed lessons learned and after action reports to examine the role of the DCE in planning military activities during federally declared disaster relief operations.

First, this monograph begins by discussing the legal and regulatory basis that established the unique relationship between Federal Emergency Management Agency (FEMA) and the military during federally declared disasters. The Federal Response Plan, FEMA's emergency response planning document, outlines the functional coordination and lead agency responsibilities during disaster response and recovery operations. Department of Defense (DoD) Directives and Army regulations provide the Defense Coordinating Officer and his staff the legal basis for military support during these operations. The operational and tactical requirements of the DCE are found by reviewing post incident reports from large-scale disasters such as Hurricane Andrew.

To define the operational and tactical environment, this monograph examines the after-after reports from Hurricane Andrew and Hurricane Marilyn. Similar essential tasks are identified at both the operational and tactical level. Tasks found in these after action reports form the basis for developing a key tasks list outlining what a DCE planner must address when conducting future disaster response activities.

After identifying these tasks, this monograph compares these recurring tasks to the principles of Operations Other Than War (OOTW) found in field manual (FM) 100-19 and joint publication (JP) 3-07. Operational and tactical requirements are evaluated against the principles of OOTW to determine if that framework provides the doctrinal tools necessary for planning disaster response activities.

This research concludes that Joint MOOTW doctrine provides a partial framework consisting of planning considerations and the principles of OOTW. However, it does not address the FEMA's ESF framework or the legal basis for domestic disaster relief operations. At the tactical level, Joint and Army doctrine does not provide the tools necessary for planning and executing disaster relief. Tactical requirements can be interpolated from the principles of OOTW, however the DCE staff needs disaster response tactics, techniques and procedure (TTP) doctrine.

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INTRODUCTION

On 14 September 1995, a hurricane watch was issued and a state of emergency declared by the territorial government of the U.S. Virgin Islands (U.S.V.I). Readiness Group Redstone was alerted by First Continental United States Army to prepare for possible deployment to the U.S.V.I. to establish a Defense Coordination Element (DCE) to coordinate Military Activities to Civil Authorities (MACA) response operations. The First U.S. Army Emergency Operations Center (EOC) was activated and began 24 hour operations. On 15 September 1995, the DCE Emergency Response Team Alpha (ERT-A) for St. Thomas and St. Croix departed Atlanta at 0712 via Delta Airlines arriving San Juan, Puerto Rico at 1025 a.m. Hurricane Marilyn made landfall on the Virgin Islands at 151800 September 1995. On 16 September 1995, the President declared the Virgin Islands a federal disaster area. COL Billy Stevens was designated the Defense Coordinating Officer effective 161330 September 1995.[1]

During those late evening hours of 15 September 1995 a category two hurricane[2] attacked the Caribbean isles of Saint Thomas, Saint Johns and Saint Croix in the U.S. Virgin Islands, a well known vacation destination with a tourist based economy. The storm struck the coast with 130 plus mile per hour winds that pushed an 8-foot wall of water through the tropical harbor known as Charlotte Amalie Bay. This storm surge lifted pleasure craft, 40-foot yachts and even the US Coast Guard cutter out of their moorings in the harbor and crashed them upon the streets and sea walls lining the harbor. The winds and torrential rains tore through the harbor community destroying homes, public buildings and businesses leaving behind a debris-strewn landscape.[3] In less than six hours this hurricane inflicted more than 500 million dollars of damage upon this tropical paradise.[4]

Initial damage assessments were beyond belief. The damage was unimagined by the members of the Virgin Island Territorial Emergency Management agency, the Defense Coordination Element (DCE) early response teams (ERT) or the federal emergency management agency (FEMA) ERT as they surveyed the damage during the morning hours of September 16 and 17. Many questions and planning issues faced COL Stevens and his 13 person ERT as their military transport landed on the debris strewn airport. Every DCO and their staff face the same uncertainties when planning disaster response operations. The very process of disaster response causes the military planner to use crisis action planning. This monograph examines the tasks the DCO and his staff performs while conducting domestic disaster response operations and whether army and joint doctrine provide a planning framework and tactics, techniques and procedures to accomplish those tasks.

Planning, and preparing Army forces to conduct these operations requires both operational doctrine that outlines planning principles and "tactical" manuals containing tactics, techniques and procedures for common disaster response activities. Army doctrine for domestic support operations is contained in FM 100-19, *Domestic Support Operations*. Army schools teach war fighting doctrine that prepares a DCO and his staff for military offensive and defensive operations. Since war fighting operations are our primary military task, DCOs do not receive the same amount of instruction for military operations other than war. Officers selected to support domestic disaster response activities must rely on Army and joint doctrine for planning principles, tactics, techniques and procedures.

In assessing whether joint and Army doctrine provides the tools necessary for the DCO and his staff to conduct DCE operations, this paper first reviews the statutory basis for active duty support to FEMA. Federal Law, Executive orders, Department of Defense (DoD)

Directives and military regulations outline the expectations and limitations of military support to civil authorities. These regulations define the operational capabilities upon which FEMA draws during disaster response. A military planner preparing for DCE operations must understand the directives and regulations as well as the traditional military resources requested by FEMA.

Hurricane Andrew and Marilyn were chosen as case studies to determine the anticipated taskings a DCE planner can expect and to limit the study to a worse case scenario. Other forms of domestic support such as law enforcement, environmental assistance and community assistance are not addressed in this monograph. Although this paper focuses on DCE planning for hurricanes, lessons learned from hurricanes can also be applied to other natural disasters where community homes, businesses and infrastructure are damaged or destroyed.

Hurricanes cause extensive damage to homes, businesses, and federal property thus providing a worse case scenario. Catastrophic damage to community infrastructure frequently exceeds the capabilities of local and state emergency resources resulting in federal support. Both Hurricane Andrew and Marilyn required military support. After each operation, the military prepared detailed after action reports and key lessons learned.[5] These reports provide this monograph with the key tasks a military planner can expect to conduct during response operations. Tasks identified by the federal law and historical taskings from prior hurricanes establish the expectations for future operational and tactical requirements. Identifying the expected and potential taskings defines the realm of possible DCE operations for the planner.

After identifying the realm of the possible, this monograph compares these recurring tasks to the principles of Operations Other Than War (OOTW) and the planning framework found in Army field manuals and joint publications. The key doctrinal manuals used in this analysis are FM 100-5, *Operations*; FM 100-19, *Domestic Support Operations*; JP 3-0,

Operations; and JP 3-07, *Joint Doctrine for Military Operations Other Than War*. The OOTW principles of objective, unity of effort, legitimacy, perseverance, restraint, and security are evaluated to determine whether they provide planning principles for the DCE Planner. Additionally, Army doctrine is examined to determine if FEMA's framework for organizing the disaster response "battlefield" is included in domestic support doctrine. An evaluation of the principles and planning framework with regard to the expected task list determines whether the DCO is provided the necessary doctrinal tools for planning disaster response activities.

CHAPTER 1: REGULATORY BASIS FOR DOMESTIC DISASTER RESPONSE

Throughout United States history, the military has assisted civil authorities during civil disturbances, and natural or manmade disasters. Dating back to 1803, the federal government assisted states by planning and mitigating the damage caused by natural disasters.[6] Since 1803, federal support has been provided to communities throughout the United Sates and its territories more than 100 times. During disasters such as the wild fires, or earthquakes, hurricanes or tornados, the military has routinely assisted civil authorities. What is the basis for the use of active duty, National Guard or reserve military forces?

The Army has provided assistance to the country for many years though actions taken by local commanders or through congressionally mandated support. Local commanders frequently assist the community with public works, education, and training.[7] Large-scale assistance, such as disaster response, is congressionally mandated. One of the earliest examples of congressionally mandated support occurred during the final year of the Civil War. Army officers provided relief to freed slaves and poor white people through the Freedman Bureau.[8] Since the Civil War, Congress enacted broad ranging legislation authorizing use of the military to support flood prevention, disaster response, and response to weapons of mass destruction.[9]

Federal Laws

Several Federal Laws define the disaster response environment. Some laws are permissive allowing the use of federal troops, while others such as *Posse Comitatus Act* are restrictive. *The Stafford Act*, *The Economy Act* and the *Defense Emergency Response Fund* are permissive laws allowing the use of military forces, use of military equipment and the

reimbursement of supplies and services in support of federal agencies. Each of these regulations affects either manning, resourcing or funding for the use of military forces and equipment.

Flood prevention and disaster response legislation, known as *The Stafford Act*, define today's military role in a federal response after a disaster. The history of *The Stafford Act* begins with Congressional passage of *The Disaster Relief Act of 1974.*[10] It formally established today's Presidential disaster declarations process and gave the president authority to direct available federal resources in support of state emergency response. His authority to direct resources included:

- Use or lend with or without compensation, their equipment, supplies, facilities, personnel, and other resources.
- Distribute or render, through the American National Red Cross, the Salvation Army, The Mennonite Disaster Service, and other relief and disaster assistance organizations, medicine, food, and other consumable supplies or emergency assistance.
- Donate or lend surplus equipment and supplies.
- Perform emergency work or services essential to save lives and to protect and preserve property, public health and safety.[11]

While this congressional act improved the President's ability to quickly fund disaster response activities, the actual support process remained confusing, complicated and uncoordinated since multiple federal agencies routinely became involved. These federal agencies requested the Executive Office to reorganize the federal response organization. On 19 June 1978 President Carter submitted Reorganization Plan #3 of 1978 outlining the establishment of FEMA. This reorganization merged programs from five agencies, the Departments of Defense, Commerce, Housing and Urban Development, the Federal Broadcast System and the General Services Administration, into a single agency. "FEMA was to absorb all Federal preparedness, mitigation, and response plans into a single agency thus becoming a single point of contact at the

Federal level empowered to use all existing emergency resources in response to both civil defense and disaster related emergencies."[12] Through Executive Order12148, President Carter establishing this central point of contact for disaster response activities with the formation of the Federal Emergency Management Agency. In 1979, Congress passed Public Law (P.L.) 93-288, *The Disaster Relief Act of 1979*, in order to improve the federal Government's disaster response. In 1988, P.L. 100-707 amended P.L. 93-288 and revised the 1974 and 1979 Relief Acts. Together these revisions were named the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* and are now referred to as *The Stafford Act*. *The Stafford Act* "provides the authority for the Federal Government to respond to disasters and emergencies to save lives and protect public health, safety, and property."[13] These congressional actions formalized the process for employing federal resources after a presidential declared disaster.

FEMA further organized support from federal agencies by functional area in order to establish a chain of responsibility and method of coordinating the efforts of numerous federal agencies. Twelve categories or emergency functional areas were established. Each was assigned a primary or lead agency to coordinate the activities within each emergency support function (ESF) area. The twelve emergency support functions (ESFs) are: transportation, communications, public works & engineering, firefighting, information and planning, mass care, resource support, health and medical services, urban search and rescue, hazardous materials, food and energy.[14] See Figure 1-1 for lead agency assignments. Additionally each ESF is assigned supporting agencies that coordinate and report their activities to the lead agency. The U.S. Army Corps of Engineers, Department of Defense is the lead agency for public works and engineering. In the other eleven ESFs, DoD is a supporting agency.

ESF	ESF Title:	Lead Agency:
1	Transportation	Department of Transportation
2	Communication	National Communications System
3	Public Works	U.S. Army Corps of Engineers, DoD
4	Fire Fighting	Forest Service, Department of Agriculture
5	Information and Planning	Federal Emergency Management Agency
6	Mass Care	American Red Cross
7	Resource Support	General Services Administration
8	Health and Medical Services	Department of Health and Human Services
9	Urban Search and Rescue	Federal Emergency Management Agency
10	Hazardous Materials	Environmental Protection Agency
11	Food	Food and Nutrition Service, Dept, of Agriculture
12	Energy	Department of Energy

Figure 1-1 Emergency Support Functions and Lead Agency Assignments

See Appendix A for a description of each ESF and a matrix that displays both lead and supporting agencies. The supporting role assigned to DoD is the key command and control concern faced by military forces found in the DoD – FEMA and DoD - federal agency relationships supporting disaster response activities.

When the President of the United States declares an area a major disaster, federal resources are made available through *The Stafford Act*. FEMA authorizes the use of Federal resources through a funding and authorization process known as assignment of FEMA missions. A DoD officer, usually a Colonel or above, is assigned by the President as the Defense Coordinating Officer (DCO). He coordinates the use of DoD resources when requested by a FEMA mission assignment.[15] While *The Stafford Act* authorized the use of DoD assets and the assignment of the DCO, DoD Directive 3025 established the DCO's staff and command and control known as the Defense Coordination Element (DCE). The details and the operation of the DCE are addressed in a later discussion within this chapter.

After addressing manpower and organizational structure, the federal government realized that federal agencies would not voluntarily expend budgeted resources without some accounting

or reimbursement. Congress addressed this matter through *The Economy Act* (*Section 1535, Title 31 United States Code*). Basically, this act authorizes federal agencies to provide supplies and services to each other, and mandates cost reimbursement for those services and materials. While *The Economy Act* authorized reimbursement for federal agency-provided services, the Department of Defense required special appropriations approval to fund their activities. Congressional approval was included in the *1990 DoD Appropriations Act.*

When Congress approved the *DoD Appropriations Act of 1990*, also known as the *Defense Emergency Response Fund*, it set aside funding for military support to civil authorities during natural or manmade disasters.[16] Funding was established to reimburse DoD for supplies and services requested by federal agencies during disaster response. The legislation further extended the requirement for reimbursement by state and local governments to DoD for services, equipment and supplies provided to them. Lastly, the appropriations act provided the Secretary of Defense (SECDEF) approval authority for request of DoD support. The SECDEF's ability to authorize support provides single DoD tasking authority and establishes mission accountability; a similar arrangement is authorized in DoD Directive 3025, which establishes the Defense Coordination Officer (DCO) and his staff.

The Stafford Act, *Economy Act*, and the *Defense Emergency Response Fund* established the permissive environment for the cooperation and use of DoD assets in support of military support operations. Congress likewise established laws that restrict or limit the use of military forces. *Title 10, Posse Comitatus Act,*[17] and *Insurrection Act*[18] are the most important laws affecting planners involved in disaster response.

Title 10 U.S Code contains many sections that affect the use of military forces. One area of military support to civil authorities affected by *Title 10* is the activation and employment of

reserve forces. Three sections of *Title 10* affect reserve forces: *Section 12301* - "15 day rule", *Section 12302* - "national emergency" and *Section 12304* "WMD response." *Section 12301* authorizes the SECDEF to order members of reserve components to fifteen days of active duty per year without their soldier's consent. It also authorizes a reserve soldier to volunteer to serve on active duty for any length of time. In times of national emergency as declared by the President, reserve forces can be recalled and placed on active duty status. *Section 12304,* however, restricts the use of reserves for domestic support by stating: "No reserve units or members may be ordered to active duty for a disaster, accident, or catastrophe except for response to WMD incidents."[19] Taken together, these three sections restrict the use of reserve forces unless they are performing their annual 15 days of active duty or in a federal response to a weapon of mass destruction or national emergency.[20] National Guard units recalled for state duty under The Adjutant General of the State are exempt from these sections of *Title 10.* These three sections of *Title 10* do not apply to National Guard units and troops unless they are federalized. Federalized Guard soldiers follow the same laws and regulations as active duty soldiers; during active duty *Title 10* and *Posse Comitatus* apply.

Posse Comitatus is the second restrictive law that has a direct impact on military support to civil authorities. "*The Posse Comitatus Act of 1878* severely restricts the use of federal forces to enforce public law."[21] This Act was implemented to protect the rights of American citizens, and places law enforcement responsibilities upon local authorities. Reserve, and National Guard forces recalled to active duty are considered federal forces and must comply with all of the provisions of *Posse Comitatus*. Planners considering the use of Reserves or National Guard must consider the affect of *Posse Comitatus* before these forces are federalized.

The final restrictive legislation affecting disaster response actions is the provision of *Title 10* applicable to insurrection. *Section 331-35* of *Title 10 U.S. Code* allows the use of military forces to quell disturbances, enforce federal laws, guarantee civil rights or enforce court orders and to protect federal property.[22] Before employing military force, the President must issue a Presidential proclamation to disburse the insurgents, and then he must issue an Executive Order to the Attorney General and the SECDEF directing the use of military forces. Examples of the use of military force have ranged from the Whiskey Rebellion in 1974 to the Los Angeles riots in 1992. Only in worst case disaster situations would this form of military action every be required. Local law enforcement is the responsibility of the state and local government.

Federal laws define the domestic support operational environment under which DoD conducts military support to civil authorities. *The Stafford Act* codified the formation of FEMA and its organizational structure including DoD's supporting role. Resourcing and appropriation legislation provided reimbursement to federal agencies providing assistance to local, state or other federal agencies. Lastly restrictive laws were implemented to ensure protection of citizens' rights, limit the use of active duty and reserve forces to national emergencies, and to place the responsibility for public law enforcement upon state and local government. Military directives further define the operational environment of the defense coordination element.

Department of Defense Roles and Responsibilities

DoD Directive 3025, military support to civil authorities, establishes roles and responsibilities for the Department of Defense in domestic support operations. First and foremost, SECDEF has designated the Secretary of the Army as the DoD Executive agent for military support to civil authorities (MSCA). In his capacity as DoD Executive agent, he is

responsible for developing guidance, and plans for disaster response.[23] To assist him in his duties, the Secretary of the Army appoints a general officer as the Director of Military Support (DOMS); the DoD primary contact for all federal departments. The DOMS and his supporting joint staff ensure the planning, coordination and execution of many domestic support operations.[24] DOMS also coordinates use of troops from the unified or specified commands with the Chairman, Joints Chiefs of Staff (CJCS). DOMS, the Secretary of the Army and Commander-in-Chief, Forces Command (CINCFOR) prepare their staffs for domestic support operations year round.

To coordinate, command, and control military forces in a major disaster area, Army colonels are selected as Defense Coordinating Officers. Within the forty-eight contiguous states First Army or Fifth Army submit their DCO recommendation to CINCFOR for approval. For disasters in US territories in the Caribbean, CINCSOUTH appoints the DCO. CINCPAC appoints the DCO for Hawaii and U.S. territories in the Pacific. These colonels are normally assigned to the FORSCOM staff and the Training Support Brigades. Training Support Brigades provide training personnel and expertise to the National Guard. This close relationship with the National Guard and the communities in which they train provides familiarity for the officers and NCOs that conduct Defense Coordination Element duties.

Defense Coordinating Officer

To prepare for the disaster response operations, colonels assigned to the training support brigade are selected to attend FEMA and FORSCOM defense coordinating officer training. A formal certification process includes training at FEMA headquarters located at Barryville, Virginia and FORSCOM sponsored response exercises and refresher training. A two-week

program of instruction at FEMA prepares the officers for appointment as the Defense Coordinating Officer. This training includes the legal basis for military support for domestic support operations, FEMA, emergency response functions, and the Federal Response Plan, including disaster response, and weapons of mass destruction.[25] Training conducted at FORSCOM over a one week period reviews the FEMA course material and conducts practical exercises. These response exercises provide realistic scenarios for new DCOs to hone their domestic response skills before appointment. After completing their training, these officers are available for appointment, and are placed on a short notice recall plan so that certified personnel are immediately available to the CINC twenty fours hours a day, seven days a week, year round.

During disaster response operations, the defense coordinating officer is responsible to his CINC, the DOMS, and the federal coordinating officer. He is usually collocated with the federal coordinating officer near the disaster site. His responsibilities include coordination of FEMA mission assignments requiring military support, and the operational control of all military forces deployed to support the federal effort.[26] When a disaster covers a large area crossing FEMA regions, a separate DCO is appointed for each FCO. During Hurricane Andrew, the amount of damage was so widespread and devastating that the State of Florida required extensive assistance. In this situation, a Joint Task force headquarters was deployed for operational control of the numerous military forces in and around Homestead, FL. The DCO and his staff worked for the Joint Task Force Commander as a special staff, coordinating the requests for assistance from FEMA. When a joint task force headquarters is established, the DCO and his staff remain the single point of contact for military support. The commander, JTF becomes responsible for operational control of all deployed forces.

During disaster response operations, a staff known as the defense coordination element supports the defense coordinating officer. Organization of this staff is not specified in FM 100-19, *Domestic Support Operations*, however the traditional staff functions (personnel, intelligence, operations, logistics, transportation and resource management) are required. Since MSCA activities support other agencies, the defense coordinating officer must ensure he deploys liaison teams to work with each emergency support function. These liaison teams typically include officers or non-commissioned officers with engineer, transportation, quartermaster and medical experience. In every disaster, the defense coordinating officer will tailor his staff to anticipated mission requirements.

Spectrum of Military Operations

> What are the training and organizational implications of a broader Army disaster role? At least two oversimplified approaches, at the ends of the spectrum of possible responses, can be taken [with regard] to Army support to peacetime missions: "Come as you are" and "come only if fully prepared."[27]

John Schrader's comments found in the Rand study, *The Army's Role in Domestic Disaster Support,* clearly articulate the two extremes found in disaster response operations. The first extreme, "come as you are," refers to crisis response, while the second, "come only if fully prepared," describes situations where a disaster is forecasted (hurricanes, floods, forest fires). Preparing for disaster response involves the legal process required for the deployment of active forces. "Laws recognize that the National Guard, while in state status, has primary responsibility for providing initial support when military assistance is required. The Army's primary mission remains to defend the United States and its interests. It is the Army's combat readiness that enables it to accomplish domestic support operations."[28] National Guard units routinely provide

disaster response support within their own states. Their experience and familiarity with the key supported agencies allows them to prepare for, and provide, timely support before during, and after a natural disaster. The National Guard's experience conducting disaster response and hometown preparedness allows it to be fully prepared to respond. Active military forces, on the other hand, are deployed after a major disaster has been declared and appear as "come as you are" forces.

By law, active duty forces, are not deployed to a disaster site until a Presidential declaration has been made. During the hours preceding a foreseeable disaster, DOMS and CINCFOR may alert and prepare forces to respond as necessary. These preparations are conducted at the unit's own expense since a disaster declaration has not been made by the President. To observers not familiar with the military, the very process of alerting and deploying that active duty support is seen as "come as you are." What most observers do not realize is that military forces are ideally suited to provide "come as you are" support. Military occupational specialties such as engineers, transportation, quartermaster, medical service corps and officers trained in staff operations facilitate the rapid deploy of teams of specially trained soldiers. Their combat training prepares them for crisis response planning and execution. Secondly, the military's vehicles and equipment are designed to operate in an austere environments; frequently the type equipment necessary in a disaster area. Thirdly, soldiers are well disciplined and organized in a manner that supports orderly command and control in an environment often immersed in chaos. Thus active duty forces are ideally suited for crisis response. In light of these two extremes – the National Guards' first responder role and active duty forces follow-on support role, what military operations are active duty military forces prepared to conduct in support of domestic disaster response?

U.S. Public Law 93-288, *The Disaster Relief Act of 1974* (22 May 1974) clearly defines the federal government's range of operations.

> The performance of emergency works or services includes, but is not limited to search and rescue, emergency medical care, emergency mass care, emergency shelter, and; provisions of food, water, medicine, and other essential needs, including movement of supplies or persons; clearance of roads and construction of temporary bridges necessary to perform emergency tasks and essential services; provisions of temporary facilities for schools and other essential community services; demolition of unsafe structures that endanger the public; warning of further risks and hazards; public information and assistance on health and safety measures; technical advice to State and local governments on disaster management and control; education of immediate threats to life, property and public health and safety.[29]

Based upon this citation from public law, the military could expect to provide manpower and equipment to support each of the twelve emergency support functions: transportation, communications, public works & engineering, firefighting, information and planning, mass care, resource support, health and medical services, urban search and rescue, hazardous materials, food and energy.[30] The most likely requirements that the military planner should expect are: transportation support for the movement of relief supplies (food, water, clothing, and fuel) within disaster area; rotary wing transportation for aerial observations and emergency evacuation; temporary services such as potable water supplies, power generation and assistance with restoration of power; shelter and emergency medical support. Military support for these tasks must be requested by the state through FEMA using a process known as a Request for Assistance (RFA). A closer look at the traditional requests for military support is the focus of chapter two.

CHAPTER 2: DCE SUPPORTED DOMESTIC DISASTER RESPONSE ACTIVITIES

Based upon the Federal Response Plan and DoD Directive 3025, the military is required to support FEMA during a Presidential declared disaster. This chapter reviews two of the most expensive disasters in recent history to identify the emergency response tasks that each required: Hurricane Andrew in Florida (1991) and Hurricane Marilyn in the U.S. Virgin Islands (1995).[31] From the discussion of each hurricane, this monograph identifies the common tasks the DCO and his staff can expect to execute when supporting FEMA. The resulting task list reveals the expected scope of military support during domestic disaster response operations.

Hurricane Andrew (1991)

In 1991, just a short four years after passage of *The Stafford Act*, FEMA and the federal response plan was put to the test. Several days before the landfall, on 24 August 1992, of Hurricane Andrew, the military began preparing a disaster response. Expecting to support implementation of the Federal Response Plan, the military implemented portions of DoD Directive 3025.1 (draft) and the Second U.S. Army Military Assistance to Civil Authorities Plan in preparation for the hurricane.[32] MG John Heldstab, DOMS, and his staff tracked the storm as it blew west from the West Africa coast line. Based upon weather data from Hurricane Hugo, the National Weather predicted landfall somewhere between southern Florida and South Carolina. DOMS began prepositioning materials within airlift distance of the target area.[33]

The Second Army Commander took the next step to prepare for the hurricane's landfall. Since the hurricane was expected to cross the Second Army geographic area of responsibility, he appointed a DCO in accordance with a CINCFOR tasking. The DCO and his Emergency

Response Team – Advance (ERT-A) deployed to the Florida State Emergency Operations Center in Tallahassee, Florida on 23 August 1992. The ERT-A deployed to the Federal Coordinating Officer's (FCO) location to begin coordinating with the FCO and the emergency support function representatives. From the 23rd to the 24th of August, the staffs waited for the arrival of Hurricane Andrew.

On 24 August 1992, the hurricane tore through South Florida with winds up to 145 miles per hour, gusting to 175 miles per hour. A record storm surge pushed across the Florida Everglades and Biscayne Bay.[34] In its wake Hurricane Andrew left 40 people dead and 1,000 square miles of South Florida damaged. The property toll exceeded 28,000 homes destroyed and another 107,000 damaged. Adding to these personal loses, more than 80,000 businesses were either damaged or destroyed. More than 1.4 million customers lost power. Telephone service for 150,000 people was interrupted or destroyed. Roads were blocked, homes were so damaged they were uninhabitable and the majority of water sources were non-potable. Many federal agencies were required during the initial disaster response.[35]

Even though the damage was widespread, and FEMA and DoD staffs were prepared to respond, the federal government could not respond until the state requested support from the Federal Government. Florida's Governor initiated the required state actions before requesting support. After activating the Florida National Guard,[36] and conducting a preliminary assessment of the disaster area with FEMA, Governor Chiles determined the damage exceeded the state's capacity to respond and requested federal assistance. That same day, President Bush declared Dade, Monroe, and Howard counties designated disaster areas eligible for federal assistance. With this Presidential declaration, the federal resources authorized by *The Stafford Act*, including military support, could be deployed to South Florida.

During the initial days of disaster response, the people of Florida perceived that federal efforts were sluggish; arriving too late with too few supplies. Kate Hale's comments as Director of Dade County Office of Emergency Management during a press demonstrated the frustration felt by the citizens of Dade County. She inquired, "Where the hell is the cavalry in this one? We need food. We need water. For God's Sake, where are they?"[37] Upon hearing this, President Bush established a Presidential Task Force headed by the Secretary of Transportation to assist FEMA. He also ordered increased DoD participation. The "cavalry" was about to arrive in the affected counties as Joint Task Force Andrew formed 28 August, just four days after the hurricane's landfall.

JTF Andrew was commanded by LTG Ebbeson and included elements of XVIII Airborne Corps, 10th Mountain Division, a Special Purpose Marine air-ground task force, the U.S. Air Force, U.S. Army Material Command, and Canada. This JTF composed of almost 24,000 soldiers, sailors, airmen, and marines, comprised the largest response of any federal organization during disaster response operations.[38] The DCO and his support staff operated as a special staff to the JTF commander. This organizational relationship preserved the supporting relationship between the DCO and FEMA. The JTF relationship allowed the DCO to focus on the immense coordination requirements associated with this disaster, while the JTF commander and his staff focused on operational control and execution of the assigned missions. The JTF's mission statement was: "Provide humanitarian support by establishing field feeding sites, storage / distribution warehousing, cargo transfer operations, local / line haul transportation operations and other logistical support to the local population."[39] This mission answered the "call for the cavalry" requested by Kate Hale.[40]

During the next 39 days JTF Andrew performed a variety of missions during its three-phased operation. The JTF divided the disaster response into three phases: relief, recovery and reconstitution. The first and most critical phase required the rapid distribution of basic life support materials and services to the victims of the hurricane. These included water, food, shelter medical services and supplies. The second phase shifted the emphasis from supporting the victims of the hurricane to directly supporting Federal, state and local authorities. The last phase involved the continuation of services by non-DoD agencies and transition to management by the local, state and federal government.

While developing endstates for each phase of the operation, the staff identified nine areas of military support: power generation, debris removal, sanitation, food distribution, potable water, shelter, medical, schools and security. These nine areas of support correspond to ESF #1: Transportation, ESF #3: Public Works and Engineering, ESF #6 Mass Care, ESF #7: Resource Support, ESF #8: Health and Medical Services, ESF #11 Food and ESF #12 Energy. The only area not covered by FEMA emergency support functions was security. During the relief phase, JTF Andrew became the *defacto* lead agency for ESFs 1, 6, 8, 11, and 12 because DoD deployed the necessary troops and equipment into the disaster area before FEMA contracted resources were available.[41] Task Force Andrew AARs indicate that, during the first few days of relief operations, duplication of effort by DoD, non-profit organizations and federal, state, and local governments complicated the distribution of relief materials.[42]

FEMA, as the lead agency, provided DoD more than ninety taskings for relief and recovery assistance to south Florida residents. JTF Andrew arranged the taskings into missions and organized them into the following categories:

- Conduct damage assessment
- Provide aviation support
- Establish emergency feeding sites
- Establish life support center
- Provide electrical power
- Operate humanitarian depot system
- Remove debris
- Provide tentage
- Establish laundry facilities
- School repair
- Medical support
- General equipment support
- Provide personnel augmentation

The original nine areas of expected support identified during JTF mission analysis grew to thirteen with the addition of: providing aviation support, conduct damage assessment, provide general equipment support, establish laundry facilities, and establish life support centers. One task - providing security - involved *Posse Comitatus* and was retained as a local responsibility. Around military operations, JTF soldiers providing site security while local authorities handled the community's security requirements in accordance with *Posse Comitatus*.

Additional internal support requirements were discovered while reporting lessons learned during Hurricane Andrew. First, when a disaster involves a Joint Task Force headquarters, the assignment of a supporting division headquarters to plan and execute support missions is critical to the success of the operations. Division headquarters have sufficient staff personnel to plan and coordinate activities that supporting units do not have. Secondly, liaisons are required at the local government level and at each of the twelve emergency support function cells at the Field Disaster Office to coordinate taskings.[43] ESF liaisons are essential in DCE operations to reduce

duplication of effort by federal, state and local agencies.[44] Lastly, Hurricane Andrew identified the need for in-depth information in order to provide disaster relief to the community. Information requirements, such as names and phone numbers of key officials, locations of potential support sites, key water, fire, and police locations, are examples of the types of information required during the initial hours of disaster response. The intelligence section (S/G-2) can collect the necessary information during the deployment planning process and after it is deployed to support DCE or JTF operations.[45] These three internal support requirements, when supported, enable coordinated planning, reduce duplication of work and provide valuable information to the DCE and the JTF staff.

Taken together, the original planning endstates, the FEMA tasking categories and the internal support requirements define the potential tasks supported by future DCE planners. Since Hurricane Andrew occurred before publication of FM 100-19, *Domestic Support Operations*, and *DoD Directive 3025 (draft)* in final form, a second major hurricane, Hurricane Marilyn will be examined to determine if any additional tasks should be planned and coordinated by the DCE.

Hurricane Marilyn (1995)

Hurricane Marilyn occurred during the summer of 1995; a year that saw fourteen named tropical storms or hurricanes. In preparation of the hurricane season, Headquarters, First U.S. Army identified potential defense coordinating officers and staffs throughout the First Army geographic area. Readiness Group headquarters were selected to conduct DCO – DCE training in preparation for the upcoming hurricane season. The first step of the training required sending the Readiness Group Commander, COL Stevens, and his operations officer, LTC West, to the DCO course at FEMA Headquarters in Barryville, Maryland. Upon their return from the course,

Readiness Group Redstone began formal planning and training for the conduct of DCE operations. LTC West and members of the combat arms division of Readiness Group Redstone wrote a DCE standard operating procedure (SOP). MAJ Richard Furney headed the SOP writing team since he had experience with Hurricane Andrew in 1992. His experience as an artillery battalion operations officer during that deployment ensured that lessons learned during Hurricane Andrew were implemented into the Redstone Readiness Group DCE SOP.

Just weeks after conducting DCE classroom training and practical exercises with regional non-governmental agencies, the emergency response team advance (ERT-A) was notified by First Army to prepare for deployment to either St. Thomas, U.S. Virgin Islands (U.S.V.I.) or Puerto Rico prior to anticipated landfall of Hurricane Luis on 5 September 1995. The ERT-A deployed by commercial aircraft from Atlanta, Georgia to Charlotte Amalie, St. Thomas on 4 September. Arriving before the storm, the ERT-A established a temporary operations center at the Virgin Island's Territorial Emergency Management Agency (VITEMA) operation center.[46] Using laptop computers and portable power, ERT-A personnel tracked the storm until landfall. Hurricane Marilyn was measured at a category 4 on the Saffir-Simpson Hurricane Scale as it approached the Leeward Island and inflicted more than 1.2 billion dollars damage.[47] As it approached, the National Hurricane Center forecast the storm to be a category 3 storm with winds of 120 miles per hour. Instead the storm passed north of St. Thomas on 6 September inflicting the island with winds of 65 to 95 miles per hours. Storm damage in the Virgin Islands was minimal and did not require federal assistance. Therefore, the ERT-A for both the DCE and the disaster field office (DFO- The DFO is where the federal coordination officer and his ESF staff operate) prepared for redeployment.

Since four additional tropical storms were tracking from the west coast of Africa towards the Caribbean, the advance parties reconnoitered the island's facilities. Prior to redeployment, the DCE and FEMA ERT-As conducted joint face-to-face coordination with island officials, tested communication equipment with First Army Headquarters and FEMA, and reconnoitered the island to identify the location of critical transportation nodes, sources for water, fuel, food, and emergency shelter locations. This joint coordination effort provided critical information that was used seven days later, when Hurricane Marilyn struck the island.

One week later, 15 September, the ERT -A and support personnel from Headquarters, First Army deployed to the U.S. Virgin Islands again. Unlike the last trip to St. Thomas, its deployment order arrived too late for the ERT-A to fly directly to St. Thomas. All flights to the Virgin islands were either diverted to Puerto Rico or canceled due to worsening storm conditions. The ERT-A would not arrive on St. Thomas until after the hurricane passed. To avoid damage to the military aircraft (C23-Sherpa) that flew the ERT-A to U.S.V.I., the team flew west to Mayaguez, Puerto Rico and spent the night at a local hotel. By mid afternoon, the winds on the Virgin Island reached 65 miles per hour. The north edge of the hurricane struck U.S.V.I. later that evening.

The storm struck the coast with 130 plus mile per hour winds, which pushed a 8-foot wall of water through the tropical harbor known as Charlotte Amalie Bay.[48] This storm surge lifted pleasure craft, 40-foot yachts and even the US Coast Guard cutter out of their moorings in the harbor and crashed them upon the streets and sea walls lining the harbor. The winds and torrential rains tore through the harbor community destroying homes, public buildings and business leaving behind a debris-strewn landscape.[49] In less than six hours, this hurricane inflicted more than 500 million dollars of damage upon this tropical paradise.[50]

During the early morning hours of 16 September, just 6 hours after the eye of the hurricane passed over the Virgin Islands, the DCE ERT-A landed at the St. Thomas' (STT) small international airport with 13 people to conduct initial assessments and establish the defense coordination element to support the FEMA ERT-A upon its arrival. The STT ERT-A arrived at STT airport 16 0900 SEP 95[51] by C23 (Sherpa) , which were flown by VI ARNG pilots. During the inbound flight, the DCO and his staff conducted an aerial overflight of St. Thomas and St. Johns. Initial damage assessments were beyond belief. The members of the Virgin Island Territorial Emergency Management agency, the DCE ERT-A and FEMA ERT were amazed as they surveyed the damage during the morning hours of September 16 and 17. Col Steven's initial assessment forwarded to Headquarters First Army at 1600 on September 16 read:

> The situation here is serious. [It is] an island without public AM/FM radio communication, limited phone service, no power, and extensive damage to buildings and public facilities. As earlier stated, the EOC is suffering 'shock' at the devastation here on STT. As of yet, the STT [VITEMA] EOC is not fully operational and not receiving regular reports from ESFs. Negative status on shelter status, food, water, etc.... [52]

By late afternoon, FEMA's ERT arrived on St. Thomas. Damage discovered was so extensive that later that day, September 16, the President declared the U.S.V.I. a major disaster area eligible for federal assistance. Military support was deployed on St. Thomas, St. Croix, and St. Johns islands. During the next 38 days the DCE was operational.[53]

During Operation Hurricane Marilyn Relief, 16 September to 24 October 1995, Colonel Billy W. Stevens commanded the Defense Coordination Element (DCE). Under his direction, the DCE supported FEMA and the Federal Coordinating Officer. During the DCE operations, COL Stevens had operational control of Army, Navy, and Air force personnel. At the peak of the operation, 1 October 1995, 1,247 soldiers were deployed in support of the response mission. A total of 1,400 soldiers were deployed to support the relief effort. Mission support actions

taken included setting up a Combat Support Hospital (CSH), providing food, water and relief supply distribution, assisting the Coast Guard in restoring the island's navigation channel, and removing debris from many locations throughout the island.

FEMA issued a total of ninety-five requests for mission assistance (RFA) to the defense coordination element.[54] Of these, sixteen were canceled as duplicate requests for assistance by more than one ESF, or as requests for DoD options for comparison with contractor provided services. An RFA should specify the mission to be accomplished, not the equipment an ESF desires. About half of the sixteen tasks canceled by the Hurricane Marilyn DCE were requests for specific pieces of equipment. One glaring example of an ESF requesting equipment instead of defining the mission was a request for the 550-man force provider set instead of shelter for one hundred families.[55] The DCE conducted the analysis and determined that force provider would not fit on the area selected for the temporary shelter, and that the cost to FEMA and USVI was greater than shipping in temporary manufactured homes from Puerto Rico. The seventy-nine tasks, which were completed, belong to one of the ten categories below:

- Conduct damage assessment
- Communication Support (first 48 hours)
- Non-combatant evacuation
- Provide aviation support
- School repair
- Water Purification
- Medical support
- Provide electrical power
- Debris removal
- Clear navigational Channel

The Hurricane Marilyn DCE required fewer categories of support than Hurricane Andrew due to FEMA's experience and ability to coordinate and provide contract services in a timely manner. Military resources were deployed only when civilian contract services were not available, or when specialized equipment, such as a combat support hospital and Reverse Osmosis Water

Purification Unit (ROWPU), were required on short notice for limited duration missions. Contractors handle even more disaster response functions when a disaster occurs in the continental U.S. because they are readily available from areas not affected by the disaster.

Key Doctrinal Tools

From DoD experiences during Hurricane Andrew and Marilyn, a consolidated list of routine DoD support requirements for disaster response emerges. During the comparison of FEMA requests for assistance or RFA, the focus has remained on requirements not the equipment the state may request. The following tasks are routinely identified for support through the DCE:

- Conduct damage assessment
- Communication support (first 48 hours)
- Non-combatant evacuation
- Water purification and transport
- Provide aviation support
- Provide electrical power
- Fixed wing airlift support
- Medical support
- School repair
- Clear navigational channel
- Provide engineer support (temporary bridging)

Planners can use this list to prepare contingency plans for deployment of assets to meet these requirements in a timely manner. The consolidated list of DoD tasks identifies the tactical tasks that the DCE coordinates. Two additional internal tasks, providing liaison to ESFs and supported agencies, and providing operational control of military forces, serve to enable effective military operations during domestic disaster response activities. Experiences from both hurricane relief operations also concluded that these operations are conducted in a joint or interagency environment.[56] Knowing what recurring tasks have occurred in two of the most

costly hurricanes in recent history, it is time to analyze joint and Army doctrine to determine whether it provides operational principles and a battlefield framework to plan and execute these missions.

CHAPTER 3: ANALYSIS OF DOCTRINE

> Major disasters cannot be handled without adequate preparation. Forces providing relief at the scene are too busy to explain how state or national resources should have been organized. There is not enough time to reorganize and conduct training at the site of the disaster. Potential helpers will be ill prepared if untrained. Effective response requires a commitment of time and resources before a disaster occurs, which in turn requires a commitment by Army leadership to the disaster relief mission within the emerging vision of the Army of the future. This commitment will ensure that individuals and units receive adequate training, resources and recognition for their disaster response role.[57]

The above quote addresses the essence of emergency response preparedness. Not only do men, materials and equipment have to be prepared, but also doctrine and training must prepare the leaders and staff of the DCE. Soldiers are training to conduct their tactical or military occupational skills. Soldiers that drive trucks, move supplies, purify water, fly aircraft, and conduct engineering projects do these tasks on a regular basis. The DOC and staff members of the DCE do not routinely conduct training in a joint and interagency role supporting other Federal agencies. This chapter determines whether the Army provides the DCO and his staff the doctrinal tools necessary to accomplish the DCE mission.

Planning military operations requires doctrinal tools at two levels: operational and tactical. Operational level planning focuses on when, where and for what purpose forces will be deployed.[58] This definition, found in Joint Pub 3-0, *Doctrine for Joint Operations*, is primarily written for wartime military operations. However it also applies to military operations other than

war. Commanders use planning principles and a battlefield framework to frame various aspects of a problem set and determine how they can best provide trained and equipped military forces to support response operations. These planning principles and the battlefield framework are the DCO's operational level doctrinal tools. Subject matter experts on the DCE staff and supporting commanders, who plan and execute missions, require a different set of doctrinal tools. Their tools focus at the tactical level and include the military decision making process and detailed tactics, techniques and procedures that assist them in executing their missions. This chapter examines current joint and Army doctrine to determine whether it provides the "tools" needed by the DCO / DCE to plan and coordinate the actions of military units in support of Domestic Disaster Response Activities.

Operational Tools – Joint Doctrine

Hurricanes Andrew and Marilyn demonstrated that domestic support operations are both joint and interagency operations, requiring a DCO to seek out joint doctrine addressing domestic support principles. Joint Pub 3-0, *Doctrine for Joint Operations*, focuses on war fighting with a single chapter devoted to defining military operations other than war (MOOTW).[59] Joint Pub 3-07, *Military Operations Other Than War,* focuses its discussion on MOOTW occurring on foreign soil with only a single paragraph referencing Hurricane Andrew under the category of military support to civil authorities.[60] A detailed look at both of these joint manuals begins with Joint Pub 3-0 to determine if joint publications provide principles, planning considerations and a battlefield framework for planning disaster response operations.

Does joint doctrine provide any principles for planning disaster response operations? Joint Pub 3-0, *Doctrine for Joint Operations*, focuses on war fighting and the principles of war.

It provides the DCO with the fundamentals of joint operations. Joint Pub 3-0 also defines military operations other than war and its associated principles.[61] According to Joint Pub 3-0, "Military operations other than war encompass a wide range of activities where the military instrument of national power is used for purposes other than the large scale conflicts associated with war."[62] While the principles of war (objective, offensive, mass, economy of force, maneuver, unity of command, surprise, and simplicity) generally apply, political considerations and the nature of MOOTW require additional principles.

The six principles for the conduct of operations other than war are: objective, unity of effort, legitimacy, perseverance, restraint, and security. These principles are found in Joint Pub 3-07, and Army FM 100-9.[63] The definition of each principle is:

- Objective: Every military mission is directed toward a clearly defined, decisive, and obtainable objective.
- Unity of effort: Seek unity of effort in every operation.
- Security: Never permit hostile factions.
- Restraint: Apply appropriate military capability prudently.
- Perseverance: Prepare for the measured, protracted application of military capability in support of strategic aims.
- Legitimacy: Committed forces must sustain the legitimacy of the operation and host government, where applicable.

During Hurricane Marilyn, these principles were applied during mission analysis and planning for deployment of military forces. The principle of objective required that each RFA be defined as a mission with a clearly defined endstate, instead of allowing ESFs to request people and equipment for an undetermined length of time. Unity of effort was a constant concern for the military; each RFA was checked to ensure that duplicate resources were not applied against disaster response tasks. Security operations for Hurricane Marilyn were limited to military encampments and working sites; local authorities had responsibility for law enforcement and security. First U.S. Army demonstrated restraint and legitimacy by deploying military forces to

USVI without weapons to provide support in order to avoid the appearance of a U.S. military invasion.[64] These examples demonstrate that Joint doctrine provides MOOTW principles to the DCO and his staff to assist his analysis and planning.

Does joint doctrine provide planning considerations for the DCO and his staff? Joint Pub 3-07 provides detailed MOOTW planning considerations in Chapter IV. While most of the manual focuses on foreign humanitarian assistance, Chapter IV provides several planning considerations that the DCO must review when conducting domestic disaster response. Unit integrity, command and control, public affairs, civil affairs, non-governmental agencies, private volunteer organizations, interagency operations, logistics, and support termination are essential domestic disaster response planning considerations contained in that chapter. But do these planning considerations address all of the critical issues involved with domestic disaster response?

Two critical considerations that Joint Pubs 3-0 and 3-07 do not specifically address are the restrictions and legal requirements involved in domestic support operations. While Joint Pub 3-0 uses JTF Andrew as an example of military support to civil authorities, it provides no specific guidance for domestic disaster response operations.[65] While Joint Pub 3-07 is dedicated to MOOTW, it does not describe *The Stafford Act* nor does it discuss the Federal Response Plan. Furthermore, the manual only mentions DoD Directive 3025, *Posse Comitatus* and *The Economy Act* without explaining the key elements of these directives and laws. Domestic disaster response, a form of military operations other than war (MOOTW),[66] operates under specific rules, laws, federal regulations and DoD Directives, which govern the actions of the DCO and supporting commanders. A MOOTW joint publication should address the significant elements contained in these laws, regulations and directives. The lack of any detail requires the DCO and

his staff to search out non-doctrinal, non-military documents or other references to better determine the constraints or procedures under which he must operate.

Does joint doctrine provide a battlefield framework for planning disaster response? A battlefield framework should help the planner define the battle space in which he operates. Joint doctrine defines the various portions of the battlefield, and outlines the commander's estimate process as a planning framework, but these manuals (Joint Pub 3-0, 3-07, and 5-0) do not define a specific domestic disaster response framework or provide any examples of FEMA's organizational framework.

The key difference between most military operations and domestic disaster response is the "supporting role" military forces assume in relation to federal agencies. FEMA does not command or control military forces. Military activities must be coordinated through the DCO and his staff. The DCO and his staff work with the FCO to ensure RFAs support state and federal agencies in their relief efforts. FEMA, the lead agency coordinating the federal response, utilizes twelve ESFs as a planning, reporting and coordinating structure. DoD is a supporting agency in eleven of twelve ESFs. Since the ESF structure is FEMA's *defacto* planning framework, it ought to be identified in MOOTW joint doctrine. Yet, joint doctrine fails to define FEMA's ESF planning, reporting and coordinating framework.

In summary, joint doctrine provides some of the operational tools the DCO and his staff require for planning disaster response activities. Joint doctrine provides principles of joint planning, MOOTW principles and planning considerations. It does not address the critical elements of domestic disaster response contained in US Code, Presidential Directives and DoD Directives. Furthermore, joint doctrine neglects the role of FEMA and the ESF structure it uses

for planning, coordinating and reporting operations. These shortcomings require the DCO and his staff to rely on Army doctrine for these areas.

Operational Tools – Army Doctrine

Three forms of published guidance are available to the Army DCO preparing for DCE operations: DoD Directives, Army regulations and Army doctrinal manuals. The first source, DoD Directive 3025, provides the DCO a legal basis for Army military support to civil authorities. It's specific guidance must be understood by the DCO. The Director of Military Support website provides online training resources for the DCO and his staff regarding DoD Directives.[67] A second reference for the potential DCO and his staff is Army Regulation 500-60, *Disaster Relief*, August 1981. Even though it is nineteen years old, it contains references regarding assistance to American Nations Red Cross (ESF #6: Mass Care), Boise Interagency Fire Center, (ESF #4: Fire Fighting [Now called the National Interagency Fire Center]), and other federal agencies. The regulation contains specific guidance for communication support, providing supplies to other agencies, and funding and accounting requirements. Army Regulation 500-60 clearly reflects DoD policy regarding the conduct of military support to civil authorities found in DoD Directive 3025.1.[68] Together these directives and regulations define the Army operating environment. To define the Army's operational and tactical roles requires examining Army doctrine.

Army doctrine begins with FM 100-1, *The Army*. It expresses the Army's fundamental purpose, roles, responsibilities and functions, as established by the Constitution, Congress and the Department of Defense. "As the Army's cornerstone document, FM 100-1 defines the broad and enduring purposes for which the Army was established and the qualities, values, and

traditions that guide the Army in protecting and serving the Nation."[69] This capstone manual cites Hurricane Hugo as an example of military operations other than war.[70] Operational planning details are left to FM 100-5, and FM 100-19. FM 100-5, *Operations,* defines a framework for planning and conducting Army wartime operations.[71] As the keystone manual, it provides operational doctrinal guidance for DCOs and their staffs. FM 100-19, *Domestic Support Operations* is the Army's sole disaster response field manual.

The current FM 100-5, dated 1993, provides fundamentals of Army operations, and includes one eight-page chapter on Operations Other Than War.[72] FM 100-5, *Operations,* reinforces the operational concepts of battlefield organization, principles and the planning considerations found in Joint Pubs 3-0 and 3-07. Disaster response and domestic support operations are not given any more detail beyond the principles of [M]OOTW defined in the Joint Publications. Presidential Decision Directives, laws and DoD Directives regarding domestic support are not mentioned in this document.

The 2000 FM 3-0, Operations, now in final draft form, will soon replace 1993 FM 100-5. This new manual recognizes the full spectrum of military operations, including domestic support operations and disaster response. FM 3-0 addresses the overarching concepts of *Posse Comitatus*, DoD Directive 3025.15 (referred to as Military Assistance to Civil Authorities), and the supporting role of active duties forces to other federal agencies. This draft manual even addresses the disaster response missions identified by Hurricane Andrew and Marilyn AARs. When this manual is officially released, the DCO will be provided a better set of operational level tools for domestic support operations than those found in the Army's 1993 keystone manual.

FM 100-19, the Army's *Domestic Support Operations* doctrine, provides the DCO the details not found in Joint doctrine or FM 100-5. In the preface and introduction, its authors provide a glimpse of the detail present in this manual.

> It provides general information to civilian authorities at the federal, state, and local levels involved in planning for and conducting such operations. It identifies linkages and defines relationships with the federal, state and local organizations and with other services that have roles and responsibilities in domestic support operations... ...manual provides specific guidelines and operational principles in the conduct of domestic support operations.[73]

Contained within this manual are the references pertaining to the Army's legal basis for domestic support, as well as the constraints of *Posse Comitatus, Insurrection Act, and Title 10.* Most importantly, FM 100-19 has an entire chapter dedicated to disasters and domestic emergencies.[74] At the operational level, *Domestic Support Operations* provides the DCO the resources to deploy forces, understand FEMA coordination requirements and prepare forces for disaster response operations. What are missing from FM 100-19 are the operational level tasks and lessons learned during hurricanes, floods and fires since 1993. Example tasks identified by Hurricanes Andrew and Marilyn, as well as other disaster, should be available in doctrinal manuals for the DCO and his staff. Separate disaster specific task lists for hurricanes, tornadoes, fires, and floods provide the DCO a start point for planning. Knowing the potential tasks allows the staff to plan, train and resource forces for a specific type of disaster before deployment. FM 100-19, *Domestic Support Operations*, should be revised to reflect lessons learned, and the essential planning tasks expected during differing disaster response activities.

Joint and Army doctrine provide the DCO a snapshot of the disaster response process. Both joint MOOTW and Army domestic support doctrine lack the critical tools DCO needs to plan disaster response operations. Legal references and FEMA related procedures are missing from Joint Pub 3-07, *Joint Doctrine for Military Operations Other Than War.* During disaster

response operations the DCE operates in a joint and interagency environment. Army Regulation 500-60 directs, "Major [US Army] commands will prepare contingency plans for major disasters. Plans must be coordinated with other DoD components and with appropriate Federal, State and local authorities."[75] Disaster Response operations are chaotic, complex operations. Planning for disaster response includes identifying participating forces and training requirements from the joint community. A common legal understanding of disaster response legislation by all of the Army and supporting services is essential for joint success.[76]

As DoD's Executive Agent for Military Assistance to Civil Authorities (MACA),[77] the Army is responsible for providing domestic support doctrine to disaster response forces. While FM 100-19 contains information on the legal basis for disaster response it lacks detailed disaster specific tasks and lessons learned from hurricanes, fires and floods.

Tactics, Techniques and Procedures for Domestic Disaster Response

Research for this monograph did not discover any Army TTP doctrine for domestic disaster response. The Army has a single manual that addresses fire fighting, but does not have any doctrinal manuals for hurricanes, earthquakes or floods.[78] Given this lack of any doctrinal sources for disaster response, where does the Defense Coordinating Element and supporting unit commanders derive tactics, techniques and procedures (TTPs) for the conduct of disaster response activities? Three source of tactics, techniques, and procedures are available: soldier expertise, Center for Army Lessons Learned (CALL), and the Director of Military Support website.

The first source for TTPs for any military activity is soldier expertise. As the Defense Coordination Officer assembles his staff, he should identify personnel with prior domestic

support operation experience. When COL Steven's assembled his staff for Hurricanes Luis and Marilyn, he selected his ERT-A personnel based on experience working with Federal agencies.[79] During preparations for Hurricane Marilyn, DCE staff officers identified the following potential response tasks: debris removal, communications, medical and transportation support. These tasks required technical skills possessed by engineer, signal, medical service corps, transportation and quartermaster personnel. Units possessing personnel and individual officers with these skills were scheduled in the main body for the DCE. Prior to a disaster, DCE staff officers can look at similar disasters in other areas to project likely personnel expertise required.

To assist the DCO and his staff in preparing for disaster response operations, CALL provides AARs, lessons learned booklets and information papers. Resources can be received from CALL several ways; by mail or through the Internet. Mailed materials are useful during the preparatory phases of disaster planning. The fastest and most convenient method is through Internet access.[80] CALL provides hurricane and other disaster specific lessons learned.[81] Additionally, Joint Universal Lessons Learned is available through CALL and provides very specific lessons learned. In an August 1995 report on Operation Restore Hope, the authors indicated that lessons learned are frequently not used in planning and are thus relearned.[82] Prior to deployment on DCE operations the DCO and his staff should access CALL's lessons learned database. Relearning key lessons over and over is a luxury we can ill afford.

A third source for TTPs is the Office of the Director of Military Support (DOMS). DOMS provides training materials and references on their military access only website.[83] The site provides DCE personnel the DoD Emergency Preparedness Course, lists containing points of contact, the DoD Resource Database, and a sample DCE standard operation procedures (SOPs).[84] All of these tools have a domestic disaster response focus.

These three TTP sources provide the Defense Coordinating Officer and his staff a multitude of tactical level tools for planning and controlling disaster response activities. For these tools to be effective, training must be conducted prior to deployment. DOMS, FEMA, First and Fifth U.S. Army conduct DCO/DCE training at least twice year. Senior leaders receive the necessary training to conduct their missions as DCO. Personnel assigned to the DCE are provided the tactical tools necessary to conduct DCE operations, but must look beyond the Army's doctrinal manual, FM 100-19, to find them. DCOs must ensure their operations officers seek out domestic disaster response experienced personnel, utilize the products and lessons learned at CALL and ensure their staff is familiar with the DOMS website. These three resources provide the DCE staff and supporting commanders tactical level planning tools for disaster response not found in Army doctrinal manuals.

CONCLUSIONS

The overall question, "Does joint and Army doctrine provide the tools necessary for the DCO and his staff to conduct DCE operations?" was examined at the operational and tactical levels of war. At the operational level, of war the question dealt with the organizing, equipping and sustaining of the forces deployed to support a disaster response operation. At the tactical level of war, this monograph dealt with the tactics, techniques and procedures the DCE staff and supporting commanders utilize in the execution of DCE missions.

At the operational level, joint doctrine, especially Joint Pub 3-07, *Joint Doctrine for Military Operations Other Than War*, does not adequately address domestic disaster response. Operational doctrine should provide tools to help the DCO plan when, where, and for what

purposes forces will be deployed.[85] Legal references and FEMA related procedures related to organizing forces are missing from joint doctrine. These legal references affect the DCO's ability to plan for and control the employment of reserve and active forces. Next, while MOOTW principles and planning considerations contained in the manual provide the DCO a rudimentary planning framework for organizing and sustaining forces, these do not match FEMA's ESF framework. FEMA uses its own list of ESFs as a planning, coordinating and reporting framework, yet no mention of this framework exists in joint doctrine. The absence of a common legal basis and FEMA's ESF framework do not prepare the DCO to conduct DCE operations.

The second source of operational guidance is contained in Army doctrinal manuals. FM 100-9, *Domestic Support Operations,* does provide the DCO a legal basis for DCE operations, planning principles, and considerations for domestic support operations. The broad category of domestic support operations does not provide the DCO sufficient examples of disaster specific doctrine to plan, coordinate and execute disaster response operations. Anticipated task lists and mission planning considerations tailored to disaster relief are two of the missing tools the DCO requires to equip, train, and sustain forces deployed to disaster response. The Army needs a disaster response field manual that addresses operational and tactical planning procedures and lessons learned from disaster response operations involving hurricanes, fires, earthquakes, and floods.

The DCO, his staff and supporting commanders also look to doctrine to find tactical references and tools necessary for planning and executing domestic disaster response missions. This monograph found that Army domestic support doctrine does not contain TTPs for the DCO, his staff or supporting commanders to conduct disaster response operations. Fortunately,

DOMS, FEMA, CALL and the two U.S. Armies have provided Internet websites with a variety of tools for the DCO, his staff and supporting commanders to use. When FM 100-19, *Domestic Support Operations*, is revised, references to these current websites must be included.

The bottom line–joint and Army doctrine does not provide all of the tools necessary for the DCO and his staff to conduct DCE operations. At the operational level the DCO or his staff must research DOD directives, disaster response legislation and lessons learned databases to ensure he understands the disaster response environment. At the tactical level the DCO, DCE and subordinate commanders, must rely on non-doctrinal sources for disaster response planning tools. This research identified three sources for disaster response information, and tools: DOMS, FEMA, and CALL.

APPENDIX A, FEMA EMERGENCY SUPPORT FUNCTIONS

This appendix provides detail information on FEMA's Emergency Support Functions (ESFs). The first section defines each ESFs in accordance with the Executive Summary of the Federal Response Plan (FRP). The second section of this appendix contains a matrix displaying the relationship between selected federal agencies and each ESF.

ESFs Defined

The FRP employs a functional approach that groups federal response assistance under 12 Emergency Support Functions (ESFs). Each ESF is headed by a primary agency. Federal response assistance is provided using some or all ESFs as necessary.

ESF #1: Transportation
Lead agency: Department of Transportation

Assists Federal agencies, State and local government entities, and voluntary organizations requiring transportation capacity to perform response missions.

ESF #2: Communications
Lead agency: National Communications System

Ensures the provision of Federal telecommunications support to Federal, State, and local response efforts.

ESF #3: Public Works and Engineering
Lead Agency: U.S. Army Corps of Engineers, Department of Defense

Provides technical advice and evaluation; engineering services; contracting for construction management, inspection, and emergency repair of water and wastewater treatment facilities; and potable water and ice, emergency power, and real estate support to assist State(s) in lifesaving and life-protecting needs, damage mitigation, and recovery activities.

ESF #4: Firefighting
Lead Agency: Forest Service, Department of Agriculture

Detects and suppresses wildland, rural, and urban fires resulting from, or occurring coincidentally with, a major disaster or emergency.

ESF #5: Information and Planning
Lead Agency: Federal Emergency Management Agency

Collects, analyzes, processes, and disseminates information about a potential or actual disaster or emergency to facilitate the activities of the Federal Government in providing assistance to affected States.

ESF #6: Mass Care
Lead Agency: American Red Cross

Coordinates Federal assistance in support of State and local efforts to meet the mass care needs of victims, including sheltering, feeding, emergency first aid, and bulk distribution of emergency relief supplies.

ESF #7: Resource Support
Lead Agency: General Services Administration

Coordinates provision of equipment, materials, supplies, and personnel to support disaster operations.

ESF #8: Health and Medical services
Lead Agency: Department of Health and Human Services

Provides coordinated Federal Assistance to supplement State and local resources in response to public health and medical care needs.

ESF #9: Urban Search and Rescue
Lead Agency: Federal Emergency Management Agency

Deploys components of the National Urban Search and Rescue Response System to provide specialized lifesaving assistance to State and local authorities, including locating, extricating, and providing initial medical treatment to victims trapped in collapsed structures.

ESF #10: Hazardous Materials
Lead Agency: Environmental Protection Agency

Provides Federal support to State and local governments in response to an actual or potential discharge and/or release of hazardous substances.

ESF #11: Food
Lead Agency: Food and Nutrition Service, Department of Agriculture

Identifies, secures, and arranges for the transportation of food assistance to affected areas requiring Federal response, and authorizes the issuance of disaster food stamps.

ESF #12: Energy
Lead Agency: Department of Energy

Helps restore the nation's energy systems following a major disaster requiring Federal assistance; and coordinates with Federal and State officials to establish priorities for repair of energy systems and to provide emergency fuel and power.

Federal Agencies FEMA ESF Relationships

ESF / ORG	1 Trans	2 Comm	3 Public Works & Eng	4 Fire fighting	5 Info / Plans	6 Mass Care	7 SPT	8 Health and Med.	9 USR	10 HAZ MAT	11 Food	12 Energy
USDA	S	S	S	**P**	S	S	S	S	S	S	**P**	S
DOC		S	S	S	S	S	S			S		
DOD	S	S	**P**	S	S	S	S	S	S	S	S	S
DOEd					S							
DOE	S		S		S		S			S		**P**
DDHS			S		S	S	S	**P**	S	S	S	
DHUD						S						
DOI		S	S	S	S					S		
DOJ					S			S		S		
DOL			S				S		S	S		
DOS	S									S		S
DOT	**P**	S	S		S	S	S	S	S	S	S	S
TREAS					S							
VA			S		S	S	S					
AID								S	S			
ARC					S	**P**		S			S	
EPA			S	S	S			S	S	**P**	S	
FCC		S										
FEMA		S		S	**P**	S	S	S	**P**	S	S	
GSA	S	S	S		S	S	**P**	S	S	S		
ICC	S											
NASA					S							
NCS		**P**			S		S	S				
NRC					S					S		
OPM							S					
TVA	S		S									S
USPS	S					S		S				

Emergency Support Function Assignment Matrix, Federal Response Plan

P = Primary Agency: Responsible for management of ESF
S = Support Agency: Responsible to supporting the Primary Agency

ENDNOTES

[1] Department of the Army, Memorandum dated 20 October 1995: "Initial After Action Report: Department of defense Assets conducting Hurricane Marilyn Relief Operations" Summary of comments contained in the AAR submitted to First Continental United States Army.

[2] The strength of a hurricane is rated from 1 to 5. The mildest, Category 1, has winds of at least 120 km/h (74 mph). The strongest (and rarest), Category 5, has winds that exceed 250 km/h (155 mph). Within the eye of the storm, which averages 24 km (15 mi) in diameter, the winds stop and the clouds lift, but the seas remain very violent.. Category two hurricanes posses winds between 75 and 95 miles per hour. Additional information about the Saffir-Simpson Hurricane Scale and the effects of a hurricane can be found at: http://www.nhc.noaa.gov/aboutsshs.html.

[3] Digital photos of the Hurricane Marilyn damage can be viewed at FEMA's web site. www.fema.gov

[4] FEMA, *Disaster Facts, Top Ten Disasters Ranked By FEMA Costs (1989-1999),*[FEMA Virtual Library and Reading Room] Accessed February21, 2000, available from http://www.fema.gov/library/df_2.htm Hereafter referred to as FEMA, *Disaster Facts.* Hurricane Marilyn is the tenth most cost disaster during the decade of 1989 –1999.

[5] The lessons learned are contained in a database known as JULLS (Joint Universal Lessons Learned) and can be found at the Center for Army Lessons Learned located at Fort Leavenworth, Kansas.

[6] FEMA, *History of FEMA,*[FEMA Virtual Library and Reading Room] Accessed February21, 2000, available from http://www.fema.gov/library/df_2.htm. This citation states that The Congressional Act of 1803 was considered the first piece of disaster legislation. Federal assistance was provided to a New Hampshire town following an extensive fire.

[7] U.S. Army FM 100-19, *Domestic Support Operations,* (Washington D.C.: Headquarters Department of the Army, 1 July 1993), 1-3. Commanders can assist local communities in a variety of ways. For examples and detailed explanations of assistance authorized review Chapter Eight, Community Assistance.

[8] "Freedmen's Bureau," Microsoft® Encarta® Encyclopedia 99.[CDROM] © 1993-1998 Microsoft Corporation. The Freedman Bureau's principal aim was to provide assistance to the newly emancipated blacks of the South after the American Civil War. The army assisted by providing temporary food and shelter. This activity was authorized by congressional action and continued into 1866 by a vote of Congress over a presidential veto.

[9] Flood control and authorization for flood prevention is contained in the Flood Control Act. Response and mitigation actions for weapons of mass destruction are contained in Presidential Decision Directive 39(PDD-39), *U.S. Policy on Counter Terrorism* dated June 21,1995, PDD-62,

U.S. Policy on Combating Terrorism, dated May 22,1998, and PDD-63, *Critical Infrastructure Protection*, dated May 22, 1998.

[10] FEMA, *History of FEMA,*[FEMA Virtual Library and Reading Room], 2.

[11] U.S. Public Law 93-288, *The Disaster Relief Act of 1974* (22 May 1974), 164- 166. Hereafter referred to as *The Disaster Relief Act of 1974.* The provision also provides for the following services or assistance: "The performance of emergency works or services includes, but is not limited to search and rescue, emergency medical care, emergency mass care, emergency shelter, provisions of food, water, medicine, and other essential needs, including movement of supplies or persons; clearance of roads and construction of temporary bridges necessary to perform emergency tasks and essential services; provisions of temporary facilities for schools and other essential community services; demolition of unsafe structures that endanger the public; warning of further risks and hazards; public information and assistance on health and safety measures; technical advice to State and local governments on disaster management and control; education of immediate threats to life, property and public health and safety."

[12] *Message from the President of the United States*, Reorganization Plan Number 3 of 1978, House Document No. 95-356, 95th Congress, 2nd session (Washington, D.C.: GPO, 1978) 3. as quoted in LTC Patrick Conners, *An Assessment of FEMA Today*, U.S. Army War College Essay, (Carlisle Barracks, Pennsylvania: Defense Technical Institute, March 1986), 8.

[13] The Federal Response Plan for Public Law 93-288, as Amended, April 1992, 1.

[14] FEMA, *Federal Response Plan; An Executive Overview,* April 1999, (Washington: D.C.: Federal Emergency Management Agency), Folded handout, and FEMA Briefing: "FDR Brief, EPLO Course", as of 7/99 found in U.S. First Army, *Department of Defense Emergency Preparedness Course*, Course Book #1 dated 3-7 January 2000 (available from Mr. Kelly Shields, FORSCOM Hqs, Fort Gillem, GA), 11. The FEMA briefing here after is refered to as FEMA*: FDR Brief, EPLO Course.* The April 1999 Federal Response Plan Handout from FEMA provides an excellent overview of the ESFs. The ESF chart found in FM100-19 on page 5-7 is outdated. In 1993, the US Army was lead agency for urban search and rescue, even though the military was trained only in rugged terrain search and rescue. FEMA is now the lead agency for urban search and rescue allowing it to tap into state and local search and rescue teams trained to conduct searches in urban environment. DoD is still a supporting agency and assists in both remote and urban terrain searches.

[15] FM 100-19, 3-2.

[16] FEMA*: FDR Brief, EPLO Course*, slide/handout 10.

[17] Ibid., slide/handout 7. *Posse Comitatus Act* is contained in Section 1385, *et Seq* of Title 18 United Sates Code.

[18] Ibid., slide/handout 8. Insurrection laws are found under Sections 331-35 of Title 10 United States Code.

[19] Ibid., slide/handout 6. and Title 10 U.S. Code (accessed 20 Feb 2000) available from http://www4.law.cornell.edu/uscode/10/index.html.

[20] FM 100-19, 2-9.

[21] FM 100-19, 1-3, and FEMA: *FDR Brief, EPLO Course*, slide/handout 7. Section 1385, et seq of Title 18 U.S. Code specifically prohibits the use of federal troops for law enforcement, specifically naming the Air Force and Army. The marines and Navy are similarly prohibited under DOD directives.

[22] FEMA: *FDR Brief, EPLO Course*, slide/handout 8.

[23] FM 100-19, 2-5.

[24] Ibid., 2-4 to 2-5.

[25] FEMA Virtual Library, http://www.fema.gov.

[26] FM 100-19, 2-8.

[27] John Y. Schrader, *"The Army's Role in Domestic Disaster Support,"*(Santa Monica, CA: RAND, Arroyo Center, 1993).

[28] FM 100-19, xviii.

[29] *The Disaster Relief Act of 1974, 166.*

[30] See Annex A for a detailed description of the ESFs.

[31] FEMA, *Disaster Facts.*

[32] Joint Task Force Andrew, "*Joint Task Force Andrew After Action Review, Volume I: Overview Executive Summary,*" Miami, Florida: Joint Task Force Andrew (15 October 1992), 2. Hereafter referred to as "JTF AAR."

[33] Tom Mathews, "What Went Wrong?" Newsweek, 7 September 1992.

[34] Governor's Disaster Planning and Response Review Committee, Final Report. January 15, 1993. Phillip D. Lewis, Chairman.

[35] FEMA organizes disaster relief activities in three phases: response, recovery, restoration. Response focuses life sustaining functions to meet immediate needs for food, water, shelter and power. Recovery begins the process of returning the community infrastructure and services to a status that satisfies the needs of the population. Restoration is long-term contractor support which returns the community to pre-incident conditions.

[36] JTF AAR, 2. The state Adjutant General activated units along the forecasted hurricane track. These units deployed to Armories north of the impact area so that a ready force would be available to respond in the first few hours after the hurricane mad landfall.

[37] Mathews, 23.

[38] JTF AAR, 1. Not only was this the largest peacetime deployment of forces to support civil authorities it was the first time the military deployed a JTF for disaster response.

[39] Ibid., 3.

[40] Mathews, 23.

[41] JTF AAR, 4. and Major Carl E. Fischer, "Interagency Cooperation: FEMA and DOD in Domestic Support Operation," (Monograph, Command and General Staff College, 1997), 15.

[42] JTF AAR, 4.

[43] Center for Army Lessons Learned (CALL), Operations Other Than War, Volume II, *Disaster Assistance*, (Fort Leavenworth, KS, 66027-7000, No.93-6, October 1993), I-5. Hereafter referred to as "CALL Newsletter 93-6."

[44] CALL Newsletter 93-6, I-7.

[45] FM 100-19, 3-5. Careful rules must be followed regarding MI officers. "MI personnel during domestic support operations is restricted as a direct result of lessons learned from their improper use in the 1960s."

[46] ERT A actually set up operations in the Chinese Restaurant adjacent to VITEMA EOC. The same man owned this building and the VITEMA EOC. Ironically, the restaurant owner had built his restaurant to withstand category 3 hurricanes without any damage. When the territorial governor turned the power off four hours before hurricane landfall, the ERT-A relied on portable generator power deployed by the team.

[47] National Hurricane Center, Hurricane Luis Preliminary Report, 27 August – 11 September 1995, National Hurricane Center Reports found at NOAA website (accessed 10 April 2000), available from: http://www.nhc.noaa.gov/1995luis.html.

[48] National Hurricane Center, Hurricane Marilyn Preliminary Report, 12-22 September 1995, National Hurricane Center Reports found at NOAA website: (accessed 10 April 2000), available from: http://www.nhc.noaa.gov/1995marilyn.html.

[49] Digital photos of the Hurricane Marilyn damage can be viewed at FEMA's web site. www.fema.gov.

[50] FEMA, *Disaster Facts, Top Ten Disasters Ranked By FEMA Costs (1989-1999),*[FEMA Virtual Library and Reading Room] Accessed February21, 2000, available from http://www.fema.gov/library/df_2.htm Hereafter referred to as FEMA, *Disaster Facts.* Hurricane Marilyn is the tenth most costly disaster during the decade of 1989 –1999.

[51] All times are St. Thomas Times (Atlantic Standard Time).

[52] DCE Daily SITREP to Headquarters, First Army EOC, *Operation Hurricane Marilyn Relief SITREP #2*, 161500SEP95, 1. and DCE, *Operation Hurricane Marilyn Relief Initial SITREP*, 161500SEP95. The ERT-A arrived on the island at 0900 and submitted its initial ESF assessment at 1045 outlining the extensive damage to the airport, wooden structures, power lines, cell tower communication, public buildings including schools and the island's only hospital as well as blockage of the island's navigational channel.

[53] Authorized by FEMA Federal Disaster #1067.

[54] DCE Memorandum to Headquarters, First Army, "Initial After Action Report; Department of Defense Assets Conducting Hurricane Marilyn Relief Operations", dated 19 October 1995, 4.

[55] This example was a personally experienced by author during DCE operations on St. Thomas. The Force provider set was one of two that the Army had, and if set up would require an area approximately 10 acres in size. The proposed sites were all smaller than 5 acres. FEMA also realized if the force provider shelter was set-up, FEMA and U.S.V.I would have to cost share for a replacement module for the Army. At the time the cost of the module, and 30 days operation exceeded 500,000 dollars. The RFA was cancelled by FEMA after the analysis.

[56] FM 100-19, 2-3.

[57] John Y. Schrader, *"The Army's Role in Domestic Disaster Support,"*(Santa Monica, CA: RAND,Arroyo Center, 1993), 17.

[58] Joint Publication 3.0, *Doctrine for Joint Operations,* 1 February 1995,[Joint Electronic Library, February 2000], II-3.

[59] Ibid., Chapter V, V-1 to V-14.

[60] Joint Publication 3.07 *Military Operations Other than War*, 16 Jun 1995 [Joint Electronic Library, February 2000], III-8.

[61] Joint Pub 3.0, i.

[62] Ibid., V-1.

[63] FM 100-19, 1-4. and *Joint Pub 3.0*, vxi, and *Joint Pub 3-07*, II-1 to II-8.

[64] ERT-A personnel observed looting enroute from the airport to VITEMA EOC. Looters and roving bands of armed persons avoided US Army personnel, even though deployed soldiers did not have weapons with them.

[65] Joint Pub 3-0, V-10.

[66] The only references to disaster relief are in support of humanitarian assistance operations in foreign countries. Military support to civil authorities (MSCA) is discussed in Joint Pub 3-07 on page III-8.

[67] The website is available at: http://freddie.forscom.army.mil/dodepc.

[68] Headquarters, Department of the Army, *Army Regulation 500-60, Emergency Employment of Army and Other Resources, Disaster Relief.* (Washington D.C.: 1 August 1981), 1-1 to2-6. This regulation identifies federal statutory laws and federal regulations and directives providing for the use of military forces in support of civil authorities. Statutory authority includes: *Disaster Relief Act of 1974* (42 USC 5121-5189), Section 701 of *The Flood Control Act* (33 USC 701-709a), *The Economy Act* (31 USC 686), *Posse Comitatus Act* (18 USC 1385) and American National Red Cross Support (Section 3 Title 36 United States Code). DoD delegation includes the assignment of the Secretary of the Army as the Executive Agent to federally declared disasters, fires fighting under Boise Inter Agency Fire Agency, support to the American National Red Cross, and other disasters when directed by the Secretary of Defense.

[69] FM 100-1, *The Army*, (Washington D.C.: Headquarters Department of the Army, 14 June 1994), v. This opening line contained in the preface describes the scope and focus o f FM100-1. Note that FM 100-1 is the cornerstone document, while FM 100-5 (soon to be FM 3-0) is the keystone document.

[70] Ibid., 41-43.

[71] FM 100-5, *Operations*, (Washington D.C.: Headquarters Department of the Army, 1 June 1993), 1-3. This is the Army's keystone doctrinal manual and is currently under revision. The new manual will be numbered FM 3-0 to align with the numbering system found in joint publications.

[72] Ibid, 13-1 to 13-8. In the 1993 version of FM 100-5, the term used is operations other than war (OOTW) instead of MOOTW. FM 3-0 (FM 100-5) (Final Draft) uses the term MOOTW.

[73] FM 100-19, vvii, viii.

[74] Chapter 1 covers the concepts and principles of domestic support. Chapter 2 focuses on roles and responsibilities, while Chapter 5 specifically addresses the topic of disasters and domestic support.

[75] AR 500-60, 2-1.

[76] FM 100-19, 2-1.

[77] MACA is found in DoD Directive 3025.15 and address natural and manmade disasters and other military domestic support. MSCA (Military Support to Civil Authorities) is found 3025.1.

[78] FM 5-415, *Fire-Fighting Operations* (Washington D.C.: Headquarters Department of the Army, 9 Feb), 1-3.

[79] Six of the thirteen officers and NCOs of the advance party had experience with FEMA or National Interagency Fire Center or U.S. Army Corps of Engineers.

[80] CALL's website is available at: http://call.army.mil/call.htm Access to Databases and JULLS requires registration with CALL.

[81] An example AAR product is CALL Newsletter 93-6: *Operations Other Than War, Volume II, Disaster Assistance.*

[82] Lessons learned are reported and frequently not used. "Almost every problem occurring during Operation Restore Hope has already been documented in JULLS [Joint Universal Lessons Learned System] as a result of previous exercises and contingencies. There appears to be continuing trend of failure to fix problems already known [sic] to exist. We end up paying again to achieve the same undesirable results" Quoted from: United States General Accounting Office, "*Military Training, Potential to Use Lessons Learned to Avoid Past Mistakes is Largely Untapped,*" Report to Chairman, Subcommittee on Military Personnel, Committee on National Security, House of Representatives, GAO/NSAID-95-152, August 1995, 4.

[83] DOMS website is available at: http://freddie.forscom.army.mil/maca (Access by .mil ISP) and DoD Emergency Preparedness Course available at: http://freddie.forscom.army.mil/dodepc.

[84] Ibid.

[85] Joint Pub 3.0, Chapter V, V-1 to V-14.

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