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INTERAGENCY COOPERATION: FEMA AND DOD IN DOMESTIC SUPPORT OPERATIONS

**A MONOGRAPH
BY
Major Carl E. Fischer
Aviation**



**School of Advanced Military Studies
United States Army Command and General Staff
College
Fort Leavenworth, Kansas**

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Major Carl E. Fischer

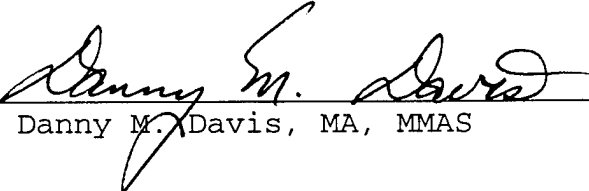
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Approved by:



LTC Clarence E. Taylor, MMAS

Monograph Director



COL Danny M. Davis, MA, MMAS

Director, School of
Advanced Military
Studies



Philip J. Brookes, Ph.D.

Director, Graduate
Degree Program

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Abstract

Hurricane Andrew was the worst natural disaster in American history. Its sustained winds in excess of 145 miles per hour razed entire neighborhoods. Debris was scattered dangerously throughout the area, restricting access and hindering assistance efforts.

The Federal Emergency Management Agency, the organization tasked with coordinating relief efforts in the wake of such disasters, tried for the first time to implement the Federal Response Plan (FRP), a document that had only been approved four months before Andrew made landfall. As the lead agency, FEMA coordinated the efforts of 26 governmental agencies and the American Red Cross.

The Department of Defense (DOD) also has a role in disaster relief operations. Today, publications such as the Army's Field Manual 100-19, *Domestic Support Operations*, provides doctrinal principles for domestic support. But in 1992, DOD had little, if any, doctrine written on disaster relief. When FEMA's initial relief efforts fell well short of residents' and the administration's expectations, DOD assumed a much greater role. Some authors proposed placing DOD in charge of the national disaster assistance program. DOD's executive agent is the Secretary of the Army.

This paper studies the interagency cooperation between DOD and FEMA, focusing specifically on the evolution of doctrine and procedures for responding to natural disasters. While both FEMA and DOD have improved in their ability to respond to disasters, some obstacles remain. Funding pre-disaster activities and the inability to use Reserve forces are the two most significant remaining shortcomings. Additionally, FEMA's failure to quickly integrate the lessons learned from previous disasters impacted negatively on response and relief operations after Hurricane Andrew.

Hurricane Andrew and Interagency Cooperation

Situation.

Hurricane Andrew first made landfall near Homestead, Florida at 4:52 a.m., Monday, Aug. 24, 1992. The commander of Homestead Air Force base, home of the 31st and 482nd Fighter Wings -- and, ironically, the 301st Rescue Squadron -- had long since sent all flyable aircraft to inland locations.¹ One C-130 transport plane, awaiting maintenance, remained on the south ramp that tragic morning. As a testament to Andrew's fury, the 100,000 pound aircraft was yanked from its mooring and tossed into a nearby hangar as if it were a child's balsa wood toy.² This "Hercules" was no match for the unforgiving violence, the incalculable force of the hurricane. The unoccupied military transport was but one of Andrew's victims. Two F-16 fighters that remained on base in shelters were also destroyed,³ as well as the air traffic control tower and virtually all other structures on the base. The magnitude of Hurricane Andrew's devastation and destruction would be the greatest in recorded history. Homestead AFB bore the brunt of Andrew's wrath.

Andrew, packing sustained winds of 145 miles per hour and gusts up to 175 miles per hour, brought about a record storm surge in Biscayne Bay.⁴ In its wake, Hurricane Andrew left 40 people dead, 1,100 square miles of South Florida damaged, more than 28,000 homes destroyed and another 107,000 damaged.⁵ Additionally, 82,000 businesses were damaged or destroyed. The loss of power to 1.4 million residents, loss of telephone service to 150,000 and damage to 9,500 traffic signs hampered response and clean up efforts.⁶ Roads were impassable, homes uninhabitable and water, non-potable.

Despite the severity of the disaster, by law the federal government must wait for a state's request to assist in response and recovery operations.⁷ Local (city and county) resources respond first -- fire departments, police units, rescue squads, etc. When local

resources are exhausted, state emergency managers can draw from state-owned assets, such as the National Guard to augment local responders. But when the magnitude of the disaster exceeds the state's capacity for effectively handling the recovery efforts, the governor may ask the president for federal assistance.⁸ Florida Governor Lawton Chiles made his request to President Bush late in the morning Aug. 24, 1992.

By 1 p.m., President Bush had declared Dade, Broward and Monroe counties disaster areas.⁹ The Federal Emergency Management Agency (FEMA) Director's initial response was to formally nominate the FEMA Region IV Director (Mr. Major P. May) to head FEMA's efforts in the disaster area. The President appointed May as the Federal Coordinating Officer (FCO).¹⁰

FEMA is the lead federal agency responsible for coordinating/implementing the Federal Response Plan (FRP).¹¹ The Federal Response Plan is the "interdepartmental planning mechanism, developed under FEMA leadership, by which the federal government prepares for and responds to the consequences of catastrophic disasters."¹² Planning and responses are based on "functional groups," with specific agencies designated as lead or support for the functional areas.¹³ (See Table 1, Emergency Support Functions and Primary Agencies and Appendix A, The Federal Response Plan: Emergency Support Functions.)

Under the provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, FEMA has the authority to task all federal agencies to "assist during periods of civil emergency."¹⁴ FEMA must also coordinate with local and state governments and establish a Disaster Field Office (DFO) to coordinate the relief effort by communicating directly with the governments in the affected area.

Within hours of notification, FEMA, as lead agency, notified the Department of Defense, which in turn contacted its executive agent, the Secretary of the Army. The action agent for the Secretary is the Director of Military Support (DOMS), an army general officer who is the Secretary's primary point of contact for domestic support

operations.¹⁵ Forty minutes later, at 4:10 p.m., the Secretary of the Army issued the order for the Department of Defense to commence disaster relief operations.¹⁶ It took FEMA only a few hours to execute the FRP and begin moving federal assets (including DOD), to Florida to augment those from state and local governments. (See Figure 1, Command Relationships.) Thus began the formal federal response that augmented the assets of the state and local governments, to assist Floridians during America's worst natural disaster in history.¹⁷

Table 1. Emergency Support Functions and Primary Agencies.

ESF #	Emergency Support Function	Primary Agency
1	Transportation	Department of Transportation
2	Communications	National Communications System
3	Public Works and Engineering	U.S. Army Corps of Engineers ¹⁸
4	Firefighting	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	Department of Agriculture
12	Energy	Department of Energy

* Changed in 1993 from DOD to FEMA, with DOD providing support in the form of transportation, urban search and rescue task forces, etc.

But while the wheels were in motion, direct assistance to the hurricane's victims was not immediate. FEMA, with its fledgling FRP, floundered for several days before effectively coordinating relief efforts. In fact, President Bush intervened twice -- first appointing a cabinet member to head a special task force, and then to increase the military forces and efforts in the disaster area. In the eyes of many residents, early federal efforts were an "abysmal failure."

The government was eventually able to mobilize a massive relief operation to help the storm victims in south Florida. In so doing, the federal government provided an unprecedented amount of assistance to the Hurricane Andrew victims. Despite these efforts, however, the public's perception of governmental effort was primarily negative. The government did not react quickly, and it did not respond immediately to the disaster situation ...¹⁹

Such is the complexity of intergovernmental operations and federal assistance in disaster relief. At first glance, both FEMA and DOD correctly and efficiently followed the established procedures to provide disaster relief. Why, then, did the President need to step in, and why were affected residents unhappy? What could FEMA and/or DOD have done differently to speed relief efforts? Have intergovernmental policies and procedures improved since Hurricane Andrew? These are the questions this paper will attempt to answer.

This study will identify the key players and document the plans for coordination and cooperation between FEMA and DOD. It will demonstrate that neither FEMA nor the Army had doctrine to facilitate a more efficient response. Yet the federal government, state and local civil authorities, and private organizations worked together to render more assistance to the residents of south Florida after Hurricane Andrew than during any previous relief effort. The efforts were not necessarily efficient, but they were ultimately effective. The discussion that follows will address some key lessons learned by each agency, existing shortcomings, and policies or programs created in attempts to rectify those shortfalls.

A critical conclusion is that federal policies, programs and plans take time to draft, disseminate and implement. Clearly, writing, implementing and administering national level policy does not happen overnight. The time that it takes to implement recommended changes at the national level is a product of a large, political bureaucracy. There is a time lag between the establishment of new policies and their acceptance and practice in the field, as well. It requires education and training. While FEMA and DOD both initiated changes in the wake of Hurricane Hugo in 1989, few of those changes had been completely integrated into response plans by 1992.²⁰ But in the emergency management

arena, bureaucratic foot-dragging can (and did) lead to unnecessary human suffering. Some of the lessons learned in 1989 were relearned in 1992 because FEMA's recommendations went unheeded.

Saundra K. Schneider, in her book *Flirting with Disaster, Public Management in Crisis Situations*, postulates that a "sizeable gap" tends to develop between disaster victims' attitudes and expectations and the policies and procedures of the governmental agencies that respond to a disaster.²¹ She contends that the relief efforts must not only address the physical needs of the victims, but the emotional ones as well.

Residents of South Florida felt abandoned both by their overwhelmed state and local officials and the unresponsive federal government. According to Saundra Schneider, "The image of an uncaring, unresponsive, and inept federal government became the emergent norm in south Florida."²² Yet, as DOD increased its efforts in Florida, residents expressed sincere appreciation to the military forces that responded to their emergency. Some have even suggested that DOD assume primacy for response to large natural disasters.²³

By studying FEMA, DOD and General Accounting Office (GAO) after action reports of Hurricane Andrew and other recent domestic support operations, one can chart the evolution of federal emergency management policies and procedures and DOD doctrine. Ultimately, infusing experiences and the knowledge gained from previous disasters can help shape the emerging doctrine and procedures to better coordinate intergovernmental domestic support operations.

Participating Agencies: The key players.

U. S. Emergency Management, a Brief History. The Constitution provides no basis for a federal agency like FEMA. In fact, Constitutional framers expressly reserved powers to the states for "all the objects which, in the ordinary course of affairs concern the

lives, liberties and properties of the people ...”²⁴ Legally as well as historically, federal disaster relief was typically limited and after the fact. For nearly two hundred years, the federal government deferred its disaster relief responsibilities to state and local authorities. This is not to say that the federal government did not assist with emergency relief efforts during this period. For example, the federal government played a direct role in such operations as the Chicago fire (1871), Johnstown flood (1889), and the San Francisco earthquake (1906). But in all cases, state and local government efforts provided the initial response.²⁵

The first real move toward burden-sharing came in 1950, when Congress passed the Civil Defense Act and the Federal Disaster Act.²⁶ These two bills provided the framework for state disaster organizations and a federal relief program, respectively. Both mandated that federal response be secondary to state efforts. Through the end of the 1960s, the federal emergency focus remained on civil defense responses to a nuclear attack. All legislation through the 1960s could be defined as “recovery” assistance, not planning- or response-related assistance.²⁷

In 1970, Congress passed the Disaster Relief Act of 1970, the first legislation with provisions for federal preparation and relief activities. However, the bill continued to place the federal government’s actions secondary to those of the state and local governments.²⁸ Then in 1978, President Jimmy Carter created the Federal Emergency Management Agency (FEMA) to coordinate federal emergency management activities. In 1979, Congress passed Public Law 93-288, The Disaster Relief Act of 1979. Carter’s intent “was to improve the federal government’s disaster response.”²⁹ In 1988, Public Law (P.L.) 100-707 amended P.L. 93-288, and significantly revised the 1970 and 1979 Relief Acts. Together, P.L. 93-288 and 100-107 were named the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act). The Stafford Act “provides the authority for the Federal government to respond to disasters and emergencies in order to provide assistance to save lives and protect public health, safety

and property.”³⁰ But the procedures that evolved from the enactment of the Stafford Act through 1992 did not substantially improve the federal government’s notoriously ad hoc relief efforts. The Federal Response Plan (FRP), signed in April, 1992, represented FEMA’s attempts to unite a myriad of federal agencies and departments “to provide assistance in an expeditious manner to save lives and to protect property.”³¹ The FRP was intended to streamline the procedures FEMA used to designate which agencies needed to provide what support in a crisis situation. In the four months between April and August 1992, the FRP did not accomplish this goal.

FEMA’s Mission

*The Federal Emergency Management Agency is the central agency within the Federal Government for emergency planning, preparedness, mitigation, response, and recovery. Working closely with State and local governments, the Agency funds emergency programs, offers technical guidance and training, and deploys Federal resources in times of catastrophic disaster. These coordinated activities ensure a broad-based program to protect life and property and provide recovery assistance after a disaster.*³²

FEMA’s Response to Hurricane Andrew. FEMA pre-positioned teams ahead of Andrew’s projected landfall, even before FEMA’s director received official notification of the presidential declaration of disaster. Contrary to some reports, FEMA was not late in responding to Florida. In fact, the first FEMA representatives arrived in Florida ahead of the storm.³³ Upon receipt of the presidential declaration, FEMA selected the director of FEMA Region IV, Mr. Major P. May as the Federal Coordinating Officer (FCO). May’s job was to assess the most critical requirements and come up with the specific plan to mobilize and coordinate federal resources to assist state and local responders. FEMA’s FCO was supported by two State Coordinating Officers from Florida. Doctrinal command relationships for state and federal response agencies are in Figure 1.³⁴

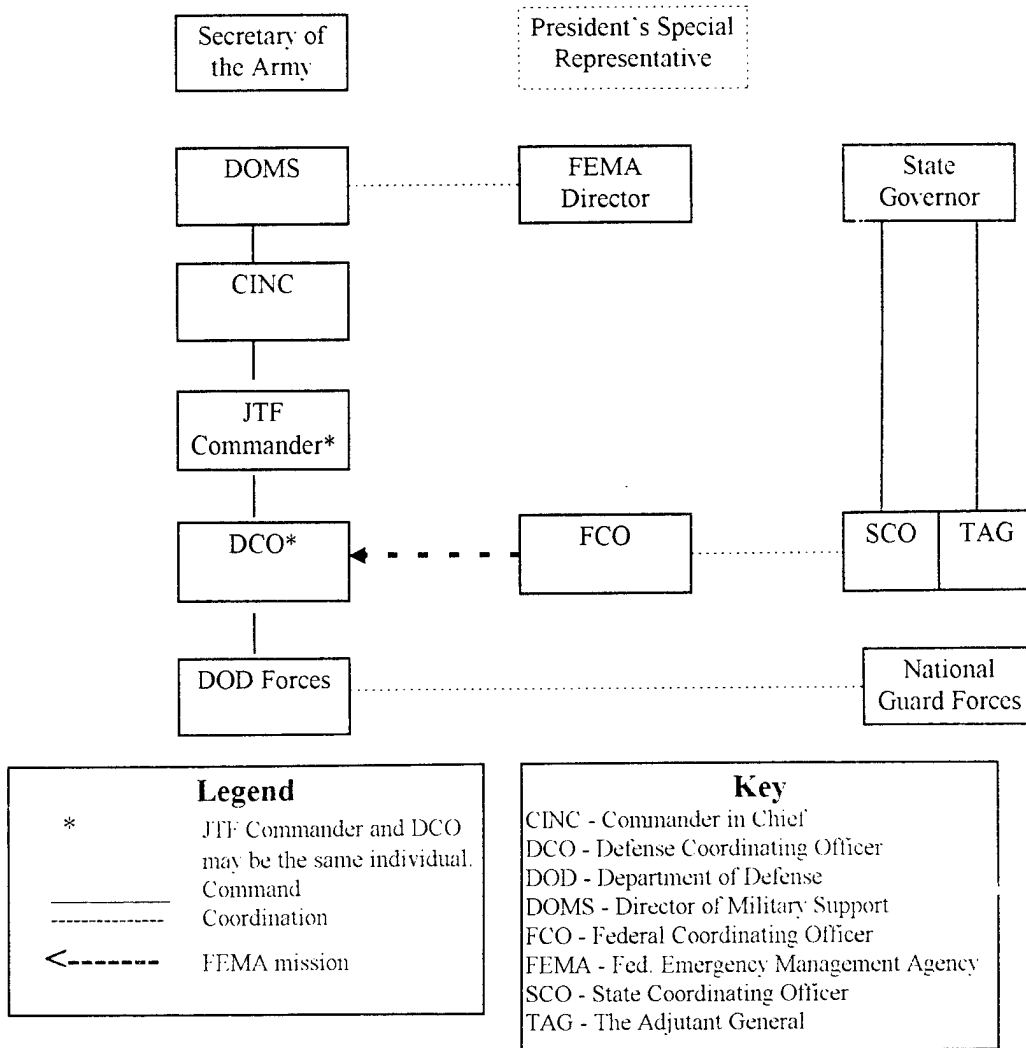


Figure 1, Command Relationships (Figure 5-5, FM 100-19)

May established a base of operations in the Eastern Airlines Building at the Miami International Airport. This would be the first time the FRP (which involves 26 federal departments and agencies and the American Red Cross) would coordinate response operations.³⁵ (Appendix A, the Federal Response Plan: Emergency Support Functions, lists the agencies and denotes responsibilities upon FRP activation.) The FEMA that would coordinate the response and recovery operations after Andrew was considerably different from the nearly impotent agency that floundered (and was severely criticized) after Hurricane Hugo and the Loma Prieta earthquake a mere three years prior. The

structural and procedural changes were primarily the result of improvements FEMA made following the ineffectiveness of its relief efforts after Hugo in 1989.³⁶

Although FEMA began drafting the FRP in 1989 in response to public and Congressional criticism generated in the wake of Hugo, the FRP was not signed until April 1992 -- just four months before Hurricane Andrew slammed into Florida. (Signed copies of the plan were still being printed when Andrew hit.) Hence, the agencies required to execute the FRP had never tested it on a large scale.³⁷ Many of the supporting documents for the FRP were still being developed when the hurricane struck, including those covering details such as notification and activation, donations policies, urban search and rescue and the Emergency Response Team (ERT) procedures guide.³⁸ So, while FEMA had improved by leaps and bounds, it was still an evolving organization.

Perhaps the fledgling FRP was the key to any success FEMA that enjoyed in the wake of Hurricane Andrew. This plan enabled FEMA to provide direct federal assistance "to save lives and protect public health, safety, and property when a state's resources and capabilities to respond [were] overwhelmed."³⁹ Despite being in its infancy, the FRP provided the basic structures and mechanisms that allowed the federal government to coordinate all the relief efforts of the 26 signatory agencies, the Red Cross and the numerous volunteer and non-governmental organizations that participated in the relief and recovery efforts. The FRP groups the resources of the assisting federal departments and agencies under 12 "Emergency Support Functions" (ESF). (See Table 1 for a list of Emergency Support Functions and their Primary Agencies, and Appendix A for a more thorough description.)⁴⁰

In theory, the lead agency or department of a specific function can provide support proactively, or as a minimum, begin the planning process. In fact, many missions are pre-assigned. But FEMA cannot disburse funds to any of the departments or agencies identified by the FRP until authorized by the presidential disaster declaration.⁴¹ This severely limits the types and amount of proactive support measures those agencies take⁴²

Using the DOD efforts as an example, the following proactive measures were completed prior to the hurricane's landfall and the actual presidential declaration:

- (June 1992) The Director of Military Support (DOMS)⁴³ issued major commands a planning order that identified the chain of command for the hurricane season and directed commanders-in-chief to develop concepts of operations for hurricane relief efforts.
- (August 19, 1992) The DOMS began monitoring the progress of Hurricane Andrew.
- (August 23, 1992) The DOMS established a Crisis Response Team and notified U.S. Army Forces Command, Transportation Command, Army Materiel Command, and Defense Logistics Agency to locate water, food, and shelter material and to determine transportation capabilities.⁴⁴

These are the types of planning activities the FRP promotes. Additional actions involving actual expenditures are not generally reimbursable under the provisions of the Stafford Act or FRP. The Stafford Act does allow reimbursement of some pre-declaration activities. For example, FEMA can reimburse personnel and agencies involved in assessment activities -- such as the deployment of the advanced element of the Emergency Response Team (ERT-A) -- or the activation of a specific ESF.⁴⁵ But the bulk of the FRP's provisions become applicable only after the presidential declaration. While DOD and the other primary ESF agencies and departments do not make financial reimbursement the "determining factor" when requested to respond to a disaster, each must consider it because of its impact on other operations.⁴⁶ Other operations also impacted on FEMA's assistance to Floridians. For the new FRP, Hurricane Andrew was not the only challenge for the new FRP.

Three other, near-simultaneous storms also complicated FEMA's efforts in south Florida. FEMA was not engaged only in the Miami-Dade County area of Florida at this time. Hurricane Andrew again made landfall in Louisiana August 26, and while weaker, caused massive damage and flooding there. Additionally, Typhoon Omar pounded Guam

on August 28 with gusts up to 150 m.p.h. and Hurricane Iniki smashed into Hawaii September 11, ravishing the island of Kauai. The magnitude of these other disasters did not approach Andrew's, but each required FEMA's (and DOD's) attention.

Despite being overwhelmed by these four disasters, FEMA successfully implemented the Federal Response Plan in each case. The implementation was admittedly incomplete. But the FRP and other improvements made in the three years since FEMA failed its last severe test (Hurricane Hugo, 1989) provided some glimmer of hope for FEMA's otherwise lackluster performance. The lack of immediate, effective response can be blamed partially on the ongoing implementation of the FRP (although signed, it had yet to be fully distributed) as well as on the restrictive provisions of the Stafford Act and the plan itself. The magnitude of the damage Andrew caused also contributed to FEMA's lackluster response.

Andrew was no minor relief effort. The hurricane had unleashed its powerful winds in a densely populated area. It wreaked great havoc in south Florida -- even though the storm was relatively "dry" as hurricanes go. Because of the speed at which the hurricane swept across Florida, most areas received only three to six inches of rain -- flooding was not a significant problem. Yet, virtually all roads were blocked with debris from uprooted trees, downed power lines and pieces of homes. This prevented state and federal officials from making a timely assessment of the extent of damage, and kept relief efforts from reaching the victims. FEMA's inability to reach those in need exacerbated the growing perceptions among the residents that help was nowhere in sight. Because of Andrew's unparalleled destruction, FEMA's plans to gain access to the affected area proved inadequate.

In its Inspector General's Audit, FEMA clearly states that gaining access to a disaster site is an "obvious precursor to delivering assistance."⁴⁷ FEMA had planned for damage to the transportation infrastructure. In fact, reestablishing ground travel routes, particularly the reopening of U.S. Route 1, topped the state's priority list. (DOD --

specifically the U.S. Army Corps of Engineers-- is the lead agency for providing temporary bridging, roadways, airfields and port facilities, under ESF #3.)⁴⁸ But the magnitude of the damage prevented FEMA from providing much-needed relief. The storm not only disrupted emergency efforts, but routine ones as well. The Florida state Department of Health and Rehabilitative Services faced the difficulty of getting food stamps and welfare checks to thousands of desperate residents throughout the affected area.⁴⁹ Thus not only were conditions in the disaster area not getting any better, in many cases, they were getting worse. Throughout the first several days, FEMA's efforts were indeed ineffective.

FEMA's inefficiency was underscored by the local media. The *Miami Herald*, the largest newspaper in the metropolitan area, ran special issues to inform residents of the services provided -- and early on, those not yet available. The delay in getting relief supplies to the south Florida residents proved to be the greatest criticism FEMA received during the operations. The *Herald* ran headlines such as, "Bureaucratic mix-ups still hindering aid," and "Revved-up relief effort kicks in at last."⁵⁰

By August 28, fully four days after the storm, the residents of south Florida had all but given up on local remedies and initial federal efforts were overwhelmed by the magnitude of the damage. Kate Hale, the Director of the Dade County Office of Emergency Management asked, "Where the hell is the cavalry on this one? We need food. We need water. We need people. For God's sake, where are they?"⁵¹ Despite (perhaps because of) FEMA's strict adherence to the FRP, little assistance had been rendered to the residents of the disaster area. Clearly more help was needed. Although the DOD had energized its relief forces through the DCO, only a small number of federal military troops augmented the overwhelmed soldiers of the Florida National Guard. That all changed rather quickly:

On the fourth day, they begged for the cavalry. On the fifth day, it rode to the rescue -- by land, by sea, by air, in force and with great purpose and military efficiency.

Thousands of U.S. troops hit South Dade's (County's) splintered ground Friday [Aug. 28], forming human chains to unload food, water, shelter -- and deliver the first real signs of hope.

Carving through red tape, finally treating the aftermath of Hurricane Andrew as an unprecedented disaster that required a warlike response, the Pentagon dispatched an abundant variety of aid to Dade County and quickly established supply lines to the front. ...⁵²

Department of Defense. The Pentagon's response was as quick as FEMA's. DOD, too, had anticipated the storm's effects and had co-located a response team with FEMA in Tallahassee before Andrew made landfall. DOD tasked the Commander-in-Chief, Forces Command (CINCFOR), to provide a Defense Coordinating Officer (DCO) to work with Mr. May, the Federal Coordinating Officer (FCO). The task fell to Second U.S. Army in Atlanta. Under the provisions of the 2nd Army's Military Support to Civil Authority (MSCA) plans,⁵³ Colonel Robert Lay became the DCO and an advanced military Emergency Response Team (ERT-A) deployed to the Florida State Emergency Operations Center (EOC) in Tallahassee.⁵⁴ Since Andrew struck south Florida, the relief efforts were now split between the state capital and the disaster site. All involved discovered the difficulties of directing a unified relief effort from two dispersed bases of operations -- Miami and Tallahassee.

One must remember that at this time, DOD had no published doctrine for emergency relief efforts. Admittedly, skeletal plans existed denoting chains-of-command and resources available. But specific tasks and techniques for dealing with FEMA and other agencies could only be found in the institutional knowledge of key members of the DOMS staff and the Second Army's MSCA Coordinating Officer. The DOD response through the first three days of disaster relief met all requirements of all published plans, including the FRP.

But by August 27, the situation in Miami had not improved significantly and residents were complaining that relief was taking too long. This prompted the president to direct increased DOD participation in relief efforts. Additionally, he formed a Presidential Task Force under the supervision of the Secretary of Transportation Andrew Card to oversee the operations in Florida.

Soon after President Bush ordered DOD to increase its role in relief operations, Second Army activated Joint Task Force Andrew, under the command of Lieutenant General Samuel Ebbesen. It was tasked to provide the command and control structure it needed to integrate all the proposed and potential military forces that would be involved.⁵⁵ (See Figure 2, Joint Task Force Andrew Staff Organization.)

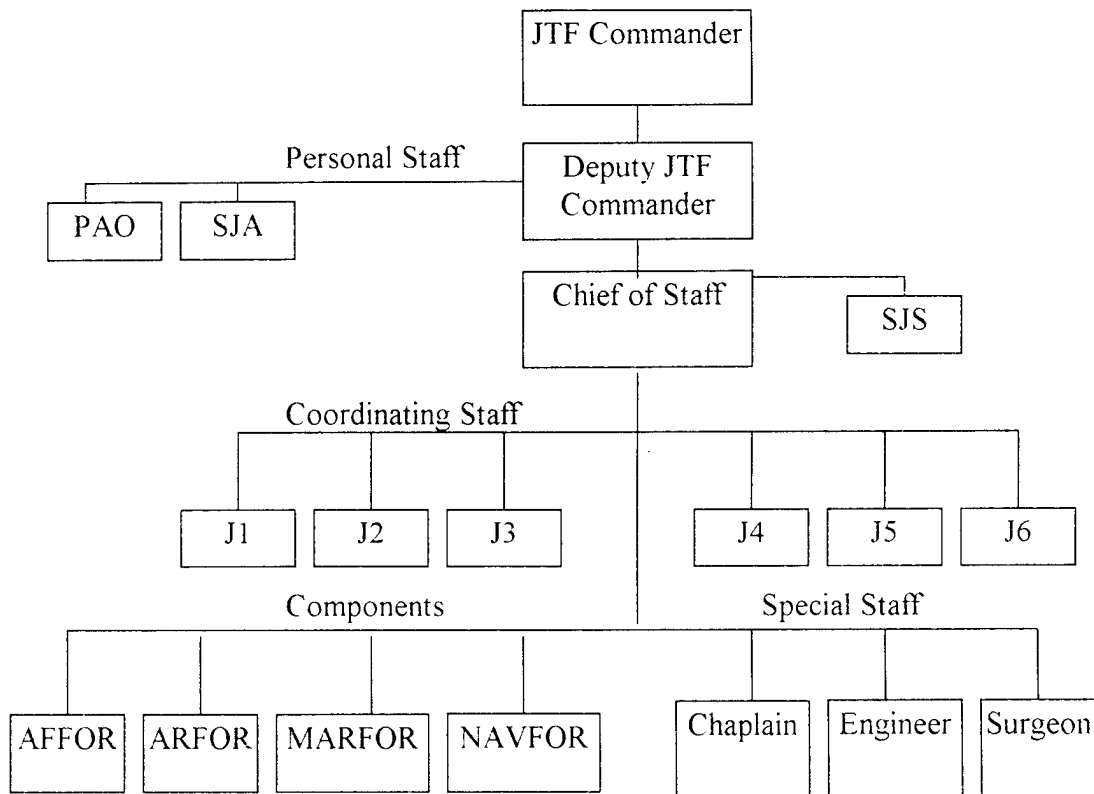


Figure 2, Joint Task Force Andrew Staff Organization⁵⁶

The next day, fully four days after the hurricane ripped through South Florida, Joint Task Force Andrew (JTFA) was providing humanitarian support in the Miami area. This was the first instance in which a JTF had attempted to piece together support packages in a domestic support operation.⁵⁷ All branches of the armed forces converged on south Florida, and ultimately, some 30,000 troops were participating in relief efforts.⁵⁸ In fact, by September 1, 1992, 14,700 soldiers, sailors, airmen and Marines (as well as Coast Guardsmen) were directly engaged in relief operations.⁵⁹ As troops, equipment and supplies filtered in, the JTF staff worked to organize itself in an unfamiliar environment: the JTF was subordinate to FEMA.

Because of the sheer size and capabilities that DOD brought to the relief effort, it became the *de facto* lead agency in ESFs 1, 6, 8, 11 and 12 (Transportation, Mass Care, Health and Medical Services, Food, and Energy),⁶⁰ as well as the two ESFs for which it already had primacy (ESFs 3 and 9 -- Public Works and Engineering and Urban Search and Rescue, see Table 1). The size of the military force deploying in support of the relief operations demanded an organization that was both responsive and functional. JTF Andrew accommodated that by establishing four component commands. (The Joint Task Force Commander created subordinate commands for the elements of each of the services. For example, ARFOR was the Army component command.) This structure proved capable of dealing with both the demands of a dynamic situation and those of FEMA and other agencies.

Missions.

FEMA and JTFA shared the same mission -- in the DOD parlance, providing relief, recovery and reconstitution assistance to the residents of south Florida. Specifically, the JTF commander saw the mission of the joint task force as:

... [establishing] field feeding sites, storage/distribution warehousing, cargo transfer operations, local/line haul transportation operations and other logistical support to the local population.⁶¹

FEMA was the de jure lead agency, and as such, it provided DOD more than 90 taskings to speed relief and recovery assistance to south Floridians. JTF-Andrew arranged the taskings into missions organized in the categories identified in Table 2.

Table 2. FEMA-directed missions for Joint Task Force Andrew.⁶²

General Categories of Missions

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

The military is fully capable of providing services for its members. However, not since the great earthquake in San Francisco in 1906 had the military attempted to provide life sustaining services and logistics for such a great number of civilians -- as well as the deployed servicemen and women.⁶³ Andrew's wrath had quickly exceeded the capabilities of state resources to include the National Guard -- and would test the active army.

It is important to note that to a great extent, the duties of the National Guard and active duty service members were kept separate. Army National Guard forces serve the governor of their state until federalized. At that time, they take orders from the National Command Authority. Considerable legal ramifications accompany the federalization of the Guard. The "*Posse Comitatus Act*" prohibits *federal* troops from conducting law and

order missions inside the continental United States, yet allows state-controlled National Guard troops to perform such functions.⁶⁴

Because of *posse comitatus* limitations, Guard troops were not federalized, and thus retained their police powers to arrest looters and to perform other law and order functions. Under the authority and direction of Governor Chiles, National Guard troops complemented active duty servicemembers -- a major success for the "Total Army" concept.⁶⁵ Once local and county assets are exhausted in a relief situation, the National Guard is a state's most capable responder.⁶⁶ The National Guard was called out first, and they quickly began the arduous tasks of clearing roads, halting looters, and conducting search and rescue operations. The magnitude of the storm, however, quickly exceeded the Guard's abilities.⁶⁷ Realizing this, Governor Chiles asked the President for more help, and the President obliged.

Within four days of the disaster, the military had arrived to the relief and even cheers of the populace. But just how prepared are soldiers to dispense humanitarian aid? Many of the troops who deployed to south Florida had recently participated in Operation Desert Storm and/or Just Cause. Did these warriors have the doctrine, training and equipment necessary to provide essential support to governments and people during this time of crisis? And if the military is so capable at conducting relief operations, why isn't DOD the lead agency?

The next section will analyze military doctrine and training for domestic support operations. While military equipment and organization are also important in the examination of this topic, this paper will not discuss them at length. Suffice it to say, however, that when ordered, the military quickly mobilized everything from mobile kitchen trailers to construction equipment and field hospitals to helicopters. Supporting this equipment were professional people and trained organizations able to employ them effectively.

Army Doctrine.

Military doctrine for domestic “operations other than war” stems from the historical use of military forces in non-combat roles.⁶⁸ This support has included everything from disaster assistance after the great Chicago fire and the Johnstown flood to administering government as our nation expanded westward in the late 1800’s.⁶⁹

The Army defines a domestic support operation as the ‘authorized use of Army physical and human resources to support domestic requirements.’⁷⁰ Military domestic support operations consist of law enforcement assistance, disaster assistance, environmental assistance (the Army provides response teams to handle hazardous spills), and community assistance such as participation in local events.

The Second Army After Action Report (AAR) clearly explained the role of the Stafford Act and other legal obligations: “The Robert T. Stafford Disaster and Emergency Assistance Act (Public Law (PL) 93-288, as amended by PL 100-707, 42 USC 5121-et seq.), as implemented by the Federal Response Plan (FRP) and DOD Directive 3025.1 (DRAFT), Military Support to Civil Authorities (MSCA), provided the framework for the federal government to provide assistance to a state and its affected local governments during major disasters.”⁷¹

The DOD Directive 3025.1 (DRAFT), was the only “doctrine” that the Army had for the relief operations. Key points of the DOD Directive 3025.1 are:

- Use of state and local resources will precede the introduction of federal assets.
- DOD will provide assets only after FEMA determines that civil capabilities have been exceeded.
- Regular military duties and all military operations have priority over domestic support operations, unless otherwise directed by the Secretary of Defense.
- DOD shall retain command and control of all military forces involved in Military Support to Civil Authorities (MSCA) activities.

- Active component forces cannot be used for law enforcement activities.⁷²

The current Army doctrinal manual, Field Manual 100-19, *Domestic Support Operations*, dated July 1993, was also being drafted when Hurricane Andrew hit. FM 100-19 incorporates many of the lessons the Army learned after recent disasters. Domestic Support Operations such as disaster relief are considered Operations Other Than War (OOTW). Included in the manual are six principles of operations other than war (Figure 3):

Objective -- troops must have a defined, achievable objective, and must know what it is.

Unity of effort -- All military efforts must be coordinated with all other participating agencies, organizations and departments.

Legitimacy -- Remain cognizant at all times of the authorities you have and don't have so as not to overstep your bounds or usurp the authority of local officials and civil government.

Perseverance -- Be prepared to stay until the job is done.

Restraint -- Particularly, soldiers must learn the methods of "graduated response" bringing to bear the minimum necessary force in any given situation.

Security -- Prevention of looting and protection of supplies are important to successful relief operations.⁷³

Figure 3. The Six Principles of Military Operations Other Than War

Military forces successfully applied all six principles during Hurricane Andrew relief operations. The mission was clear. The JTF Commander succinctly expressed the **objectives** in his intent:

Immediately begin to operate feeding and water facilities; priority to the cities of Homestead and Florida City, and Cutler Ridge. After a more detailed assessment, expand operations throughout the affected area. Provide assistance to other federal agencies, state/local governments, and organizations in receipt,

storage, and distribution of supplies and equipment. DO NOT engage in law enforcement actions/operations without approval of CG, JTF. End state is to get life support systems in place and relieve initial hardships until non-DOD, state and local agencies can reestablish normal operations throughout the AO [Area of Operations].⁷⁴

Despite the complexity of the operation, JTFA was able to unify the response effort. A Second Army ERT-A team joined FEMA's initial responders before the hurricane crossed the beach. The coordination and cooperation between FEMA and JTFA improved throughout the operation. Colonel Robert Lay, the DCO, was the area's Readiness Group commander. He was completely familiar with the civil assistance plan and the Reserve Component force structure in Florida because of his Readiness Group duties. Additionally, he had been trained extensively in MSCA activities. Even with the increased military presence, JTFA remained subordinate to FEMA, and took all taskings from FEMA. Ultimately, this **unity of effort** sped relief support to the Floridians displaced by the storm.

FM 100-19 states, "Legitimacy derives from the perception that using military force is a legal, effective and appropriate means of exercising authority for reasonable purposes."⁷⁵ The Army was seen as **legitimate** in the sense that the magnitude of the disaster required extraordinary measures. The community welcomed the servicemembers as they provided much needed supplies to the residents affected by the storm. "God sent us angels in red berets," said Andrea Martinez, a disaster area resident.⁷⁶ Clearly, the forces were perceived as legitimate by the people they were sent to help.

The DOD forces **persevered** in the stricken area until a relatively smooth transfer of control could be fashioned with the civilian authorities. The bulk of forces remained in Florida for a month or more, sharing hardships with the victims.

The principles of **restraint** (the appropriate amount of force for the mission) and **security** (remaining aware of the risks to the force and any civilians the force is protecting), were both accomplished without incident.⁷⁷ Reverend Jesse Jackson thanked

the military "for bringing security to the American people, reviving their hopes and sustaining their spirits."⁷⁸

The Army attempts to apply these principles to all operations other than war, and feels that adherence to these principles are crucial to the success of an operation. But the Army does not nor will not work alone in a support operation. Its principles and methods must complement the efforts of other military, federal and civilian organizations participating in the operation.

To achieve this synergy, DOD has drafted doctrine in the form of Joint Publication 03, *Doctrine for Joint Operations*. It details the same six principles found in Army doctrine and provides numerous "Planning Considerations as well."⁷⁹ These include working with U.S. government agencies, designing flexible command and control systems, the need for information gathering, a reminder of the constrained environment in which these operations take place, and training and education required to successfully execute non-combat missions. Joint Publication 03 was published one year after Hurricane Andrew, (September 1993), and highlights JTFA as a success story.

There can be no doubt that the poor grades the public gave FEMA's initial relief efforts were the catalyst that energized DOD and the Army's doctrine writing. Within two years of Andrew, DOD had published Joint Publication 03 and a revised DOD Directive 3025.1. The Army and Marines collaborated on FM 100-19/FMFM 7-10 and the Air Land Sea Application Center published Multiservice Procedures for Humanitarian Assistance Operations.⁸⁰ This multiservice doctrine manual synergizes DOD's efforts.

But even while DOD trains for and practices "joint" wartime operations, joint training alone is not adequate for domestic support operations.⁸¹ DOD forces are merely a slice of the overall operation -- in fact, DOD is not the lead agency. FEMA is the "supported" agency for the FRP. Therefore, training and leadership for relief operations must originate in FEMA. FEMA has rewritten its doctrine between the Hugo debacle (1989) and Andrew (1992). It is being refined with the lessons learned from the relief

efforts following Andrew. FEMA prepared an extensive after action report after Hugo and the Loma Prieta earthquake. It detailed 29 specific recommendations to improve the federal response to large-scale disasters.⁸² At the time Andrew hit south Florida, both FEMA and DOD were in the process of formulating, staffing and publishing new structures and procedures for response management. All the key players were not “on the same sheet of music.” This contributed to the delayed and confused reactions early in the operation.

DOD and FEMA were not the only ones confused during the first few days of the relief operation. State efforts faltered in the wake of the storm as well: “We’ve got 120,000 C-ration meals that are here somewhere, but we don’t know where the hell they are,” an irritated Governor Lawton Chiles said.⁸³ He blamed the mix-up on communications problems and lack of coordination among relief agencies. On that day (August 27), editorials demanding leadership from Chiles’ office began appearing in the *Herald*. The next day’s headline was simply, “**WE NEED HELP**.”⁸⁴

Despite early problems, relief efforts quickly tempered the edge of south Florida’s needy residents. The infusion of thousands of troops, with their heavy equipment, helicopters and genuine willingness to help, turned the tide of public opinion in south Florida. Although the FRP was in an infantile state, it quickly synchronized the efforts of all participating agencies and brought to bear the full potential of federal interagency relief and recovery efforts.

Training.

The Army had no training plan to prepare its soldiers for disaster assistance operations. Yet, by all accounts, DOD forces performed well.⁸⁵ In fact, the military response to Hurricane Andrew was so effective, some have considered making DOD the lead agency for domestic disaster operations. A RAND study headed by John Y.

Schrader, recommended that the military expand its role during this period of relative peace. The study envisioned disaster response missions as a primary Army mission, but without DOD assuming the lead role in disaster relief.⁸⁶ Other studies, including those done by the GAO and Sandra Schneider considered the option of DOD primacy in emergency relief operations and arrived at a similar conclusion: despite all the capabilities DOD can bring to disaster relief operations, DOD should not be the lead agency.⁸⁷ There are two clear reasons against the military leading efforts in the wake of domestic disasters -- civilian control and combat missions.

The principle of civil control of government is rooted deeply in American society. Allowing the military to take the reins of disaster relief efforts could set a dangerous precedent and lead to further assumption of powers neither specified nor implied in the Constitution. According to Sandra Schneider, "A civilian-run disaster-response system was created and developed precisely because it reflects the general orientation of civilian control over governmental operations."⁸⁸

Protecting America's national interests is clearly the military's first responsibility. Despite the inherent capability within DOD to assist in disaster relief operations, "Responding to natural disasters is, at best, a secondary concern."⁸⁹ The GAO Report concurred adding, "Giving DOD a full-time mission of managing disaster preparedness and relief could detract from its primary responsibility."⁹⁰

Clearly the nation does not support DOD assuming the lead role in disaster relief. Yet, the military remains a viable, well-prepared force capable of assisting in all 12 ESFs. Even without specific disaster relief training, servicemembers can provide aid to disaster victims by using the equipment and skills found in the service. The tools that the military can bring to bear include equipment that enables a military force to be self-sufficient in combat -- power generators, organic communications, non-perishable food, portable shelters, construction and transportation assets. Additionally, the military's hierarchical

command and control structure facilitates organization in an area without civil authority. These are the key assets DOD brings to disaster relief.

FM 100-19 sums this up when it states, "Commanders can best prepare for disaster assistance operations by understanding the appropriate laws, policies and directives that govern the military in these emergencies."⁹¹ So despite having no doctrine, little or no training and virtually no warning, members of Joint Task Force Andrew deployed to Florida to successfully combat the effects of the worst hurricane in U.S. history.

The Execution Phase.

Joint Task Force Andrew "attacked" the relief effort in three phases: relief, recovery and reconstitution. These phases have since been written into doctrine.⁹² The relief phase provided life support systems -- food, water, medical supplies and attention and shelter, as well as information, sanitation and transportation to the affected residents. Recovery operations were designed to sustain all Phase I systems while assisting local, state and federal agencies in their attempts to reestablish public services. The reconstitution objectives were designed to continue to provide the above services while preparing the local area for the transition back to normal (local) governmental and commercial control.⁹³

The plan organized military efforts (as directed by FEMA and the Presidential Task Force headed by Transportation Secretary Card) into three areas of operations (AO) -- Cutler Ridge, Homestead and Florida City.⁹⁴ The forces focused on the communities that existed prior to the hurricane, and attempted to integrate all available support to expedite the relief of suffering among the residents. Significantly, the JTF incorporated the communities into their own relief and recovery efforts. Not only did this facilitate a quicker "return to normalcy"⁹⁵ within the community, but it also followed the procedures

outlined by the Stafford Act and draft DOD Directive 3025.1, which require state and local resources to be applied first.

Troops arriving from Forts Bragg (NC), Campbell (KY), Drum (NY), and Stewart (GA), were sent to areas where they were most needed. Air hubs were formed at Homestead Air Force Base, the Opa-Locka Airport (which was home to a Coast Guard rescue unit) and the West Palm Beach Fairgrounds, where a supply point was established. The West Palm Beach supply point accepted ground shipments from the north, thus avoiding the impassable roads farther south. The Fairgrounds location allowed relief agencies to organize resources at a fully functional logistic base near the affected region.

Ground support areas were established where needed throughout the disaster area and consisted of everything from a small helicopter landing zone to off load supplies to huge life support centers consisting of tents, showers, hot meals, medical clinics and portable toilets for those Andrew made homeless. None of these facilities had been planned for ahead of time. They simply met the most important criterion: they provided immediate services to the people of south Florida. The bases provided a flexible support structure that enabled JTFA and FEMA to begin to achieve success in their operations in south Florida. Many of the successes experienced during the operation were firsts, others, simply a matter of the personal attention offered by service members, civilians and volunteers. Some of the successes are listed below.

Successes.

The magnitude of the interagency efforts in south Florida are astonishing. While sheer numbers alone do not constitute success, the magnitude of the response is a testimony to successful interagency cooperation. The numbers also show that no single organization could do it alone. Successes can be shown in the volume of support

provided, and the magnitude of the tasks required. In this sense, JTFA was a truly historic operation.

During these operations, 1,014 sorties were flown, carrying over 19.00 tons of mission support materials. Almost 900,000 meals were served. Over 80,000 tons of humanitarian supplies were moved into the area by sea and over land. Almost 2,000 tons were moved by air. Over 67,000 patients received medical treatment, and over 1,000 tents were erected. A mobile radio station was established to provide emergency information to the local population and to provide route information to assist convoys as they arrived. Four life support centers were constructed, providing mass care for 2,400 people per day for approximately 2 months. Over 6 million cubic yards of debris were removed, and 98 schools were repaired. JTF Andrew coordinated with multiple federal, state and private agencies. These included the Federal Emergency Management Agency, the Civil Air Patrol, the American Red Cross, the General Services Administration, the Public Health Service, the Department of Agriculture, the Salvation Army, the Boy Scouts of America, and numerous religious relief organizations.⁹⁶

These figures are indicative of the amount of work that communities can do in only a few weeks, when properly assisted by their federal, state and local governments.

FEMA's successes during Hurricane Andrew can be attributed to the agency's hard work on the Federal Response Plan in the years following Hurricane Hugo. While the operation was not a complete success -- as the lessons learned will show -- the groundwork that had been laid contributed immeasurably to FEMA's slow, but eventual success in south Florida.

Other successes were forged as the relief organizations -- a hodgepodge of private volunteer organizations, state, local and federal governmental organizations and the military -- united under the cause of helping the affected Floridians. While measuring success is most often done in tons shipped or homes rebuilt, relief efforts in Florida also restored faith in the government to provide needed assistance in desperate times.

Lessons Learned.

FEMA. All participants in the relief, recovery and reconstitution efforts conducted formal after action reviews to capture the lessons learned from Andrew. The FEMA Inspector General's (IG) Audit summed up the importance of these after action reviews: "After-action studies of exercises and disasters identify deficiencies that need to be addressed. Correction of these deficiencies is critical to improving performance in disaster response and recovery operations."⁹⁷ Andrew taught both the military and FEMA quite a few things about conducting disaster relief operations. Both agencies published extensive after action reports and have worked to integrate the recommendations into standard operating procedures.⁹⁸

Ironically, FEMA had released an After Action Report (AAR) in May 1991, making 29 specific recommendations based on the agency's actions after Hurricane Hugo and the Loma Prieta earthquake.⁹⁹ According to the 1993 AAR, "most of the recommendations were never implemented."¹⁰⁰ The first lesson learned from the Hurricane Andrew disaster was to heed the recommendations of previous disasters' reports.

FEMA's most important lesson was that the agency had been forewarned of the potential dangers from Hurricane Andrew in the Hurricane Hugo After Action Report. Had FEMA been more efficient in assimilating these lessons learned, the agency could have responded more quickly to Andrew. Better interagency coordination could have reduced south Floridians' suffering. As previously mentioned, FEMA's report on Hugo contained 29 recommendations that could have alleviated the early confusion. "This comprehensive report identified significant shortcomings in the Federal response and made appropriate recommendations, but the final report was not disseminated within or outside of FEMA."¹⁰¹ The FEMA IG underestimated the impact the report had. FEMA had, in fact, developed the FRP. Clearly, DOD received feedback about its operations, because it reworked the 1980 DOD Directive 3025.1.¹⁰² But with equal certainty, had FEMA better disseminated its FRP and implementation guides based on the information contained in the

1991 After Action Report, it could have played a significant role in alleviating some of the early suffering and confusion in south Florida. The following shortcomings were identified in the 1991 report and were not corrected before Hurricane Andrew in 1992:

- the need for the federal government to be better prepared, equipped and staffed;
- the need to improve FEMA's disaster assistance programs, organization and staff;
- weaknesses in state and local emergency management programs;
- inadequate construction/enforcement standards; and
- the need to coordinate and improve contributing agencies' programs and activities.¹⁰³

The 1991 report heralded so many of the problems encountered in the response to Andrew, that in 1993, the FEMA inspector general recommended that the 1991 AAR be released to FEMA offices as well as state and local emergency managers.¹⁰⁴

The 1993 FEMA report also identified shortcomings in the areas of exercising authority and activating the Federal Response Plan. While some rudimentary work had been done to implement the FRP's framework, little had been done in the more difficult area of forming the 26 various federal agencies into a "cohesive, working response team."¹⁰⁵ This task is made considerably more difficult by the fact that the FRP has no regulatory standing.¹⁰⁶ The 1993 report highlighted the improvements in federal disaster response operations brought about by the drafting of an FRP.¹⁰⁷ Despite the improvements, the plan fell short in several areas. Even though FEMA deployed some key personnel to Florida's emergency operations center (EOC) in Tallahassee, little if any equipment and few supplies were stockpiled for quick movement into Florida. Shortages of tables, computer equipment, telephones, all-weather shelters all contributed to FEMA's inability to handle the volume of applications for assistance. Additionally, FEMA failed to integrate supporting agencies' contributions -- particularly from the diverse PVOs.

FEMA's lack of self-mobilization also impacted negatively on the federal response to the disaster.¹⁰⁸

In total, the 1993 AAR made 113 recommendations on topics as varied as providing public information to establishing an early presence at the disaster site¹⁰⁹ -- not just the state EOC. Additionally, the report recommended changes to how FEMA funds its own internal activities, so the agency can complete critical tasks as soon as a need is determined, perhaps even before the impending disaster strikes. (Previously the agency was required to wait until the president declared an emergency.) During the response to Hurricane Iniki, less than three weeks after Hurricane Andrew struck, FEMA's Region X operations chief said, "Rather than wait for the state to ask for [help], we just started rolling."¹¹⁰ FEMA's Inspector General recommended that movement of assets and supplies be done during warning periods, whenever possible.¹¹¹ This would help both the federal and state governments provide more timely relief. Funding would be a secondary issue.

Another significant finding is that FEMA is too complex an organization to call an audible at the disaster site. While the relief and response efforts must be flexible enough to fit the specific situation, FEMA must avoid, at all costs, any watering down of its authority or usurping of its charter. When President Bush designated Transportation Secretary Card as the head of the "Presidential Task Force," Card became a distinct dispenser of relief services. Likewise, the military forces also provided assistance that had not been synchronized with FEMA. This led to a three-pronged effort that resulted in confusion.¹¹² FEMA had no say in the Presidential appointment, but it must refine its assistance processes so it can accommodate such "help" in the future.

The GAO Report identified some additional lessons learned. They are:

- FEMA needs to better anticipate requests, both by conducting its own assessments and planning for the state's needs.

- The Stafford Act should be amended to allow Army Reserve forces to participate in relief operations. (Currently, Reserve forces are prohibited from assisting “either the Federal Government or a State in time of serious natural or manmade disaster ...” by Section 673b of Title 10, United States Code. Karl Schneider, a FEMA manager who recently completed the Industrial College of the Armed Forces, also makes this recommendation in his draft legislation to restructure FEMA and disaster response laws.)¹¹³
- State and local emergency training needs improvement and should be subject to federal standards.
- FEMA needs to establish a separate disaster unit within FEMA to “predict, plan for and assess the damage resulting from catastrophic disasters.”¹¹⁴ The unit would facilitate faster federal response.

FEMA’s performance during Hurricane Andrew relief efforts showed that there was considerable room for improvement. Yet even the agency’s most vocal critics recognize the magnitude of the efforts FEMA successfully accomplished. Sandra Schneider acknowledges, “the federal government provided an unprecedented amount of assistance to Hurricane Andrew victims.”¹¹⁵ In taking the first step to improve its performance, FEMA’s critical internal AAR of its own actions after Hurricane Andrew serves as a high water mark for an honest assessment of its operations. Just how many of the recommendations will actually be implemented remains to be seen.

DOD. The military also took the opportunity to evaluate itself after its operations in south Florida. The first recommendation in the Joint Task Force Andrew AAR is for DOD to learn the FRP. The Army, leading DOD’s efforts, noted this shortfall in their report: “As Second Army rapidly transitioned to a fully-functioning JTF, interoperability effectiveness [with FEMA and other agencies] was hampered due to a limited knowledge by new personnel of disaster relief plans.”¹¹⁶ As the military downsizes, personnel

turnover will increasingly become an issue. Currently, senior Army officers and non-commissioned officers rarely stay in a assignment for more than two years. Therefore, at any given time, the new members of a response staff may number 25 percent or more.¹¹⁷ To synergize the efforts of the military, civilian and volunteer agencies, *military leaders familiar with the FRP and capabilities of the state and local governments and National Guard* must be appointed quickly to the staffs executing the plan. A senior leader must assume the position of Defense Coordinating Officer (DCO). The DCO is vital to coordinate with the local authorities. His technical competence and pre-established rapport with and among civil leaders multiplies his effectiveness. DCOs can come from anywhere in the military, but it is imperative that the DCO receives MSCA training prior to appointment. The Army is currently working to qualify and certify DCOs to handle the increased number of missions FEMA has received in the past decade.¹¹⁸ A two-day certification exercise is required by the Deputy Chief of Staff, Operations (DCSOPS). Education and training are key, since all the military AARs commented on improving the general knowledge of FEMA within the military, becoming more proficient on the FRP and state and local governmental operations.

The military AARs recognized the importance of putting logistics units into the deployment flow of a relief operation early on. These units can facilitate movement of supplies, contract for services as well as prepare for the arrival of more troops.¹¹⁹ Military Police and engineer (construction) units must also be at the top of the list because of the urgency with which their skills are needed in the disaster area.

Another issue identified by both FEMA and DOD is the need for information. Both organizations have public affairs/public information apparatuses (including FEMA's entire ESF 5 -- Information and Planning -- staff), and each organization claims some success in its relationship with the media. Each recognized the need to better present its accomplishments to the national media. The DOD report postulates "Clearly, the American people's impression of a joint task force humanitarian assistance mission

depends on what they see and hear on television and radio news, and what they read in newspapers and national news magazines.”¹²⁰

FEMA recognized the need to get FEMA people in the disaster area -- not just at the state EOC. This, too was a lesson learned from Hugo, but retaught by Andrew: “An immediate operating capability and visible FEMA presence are absolutely essential in responding to a devastating disaster.”¹²¹ This has physical as well as moral impact on the relief efforts.

One other minor issue surfaced: joint airspace management over an urban disaster area. While the roads were first impassable (then regulated), the skies were quickly full of relief aircraft (primarily military helicopters and transports), sightseers and commercial aircraft. It was not uncommon for a small fixed wing aircraft to “jump in as ‘chalk last’” among a flight of helicopters.¹²² News helicopters and gawkers were among the most unpredictable aircraft. The JTF AAR highlights establishing airspace control in a continental United States urban area as an unresolved, non-doctrinal problem.

DOD and FEMA have both spent a great deal of time and effort compiling and reporting these lessons learned. Contributions from GAO have assisted the thorough examination of interagency activities during domestic disaster relief operations. But assembling and assimilating lessons learned are two very different things, as the 1991 AAR has shown. To see if these lessons were, in fact, learned, one must examine how they’ve been applied since 1992.

Applying Lessons Learned.

Judging solely by the volume of documentation produced by both FEMA and the DOD (as well as the state’s “Governor’s Disaster Planning and Response Review Committee” Report), quite a few lessons were learned during the relief, recovery and reconstitution operations after Hurricane Andrew. But what, if anything, has become of

those recommendations? Have the successes been captured and made standard procedures? And have shortcomings been rectified with new doctrine?

As noted with the Hugo and Loma Prieta AAR (1991), changes within the bureaucracy take time. Some insights into lasting changes can, however, be gleaned from operations following the 1993 mid-America flooding and the 1994 Northridge, Calif., earthquake. These two disasters rivaled Andrew's requirements in some ways, and surpassed them in others. For example, the Northridge earthquake was the strongest quake in a populated area in modern times.¹²³ The massive flooding saw nine states receive Presidential Disaster Declarations within a 45 day period.¹²⁴

In both instances, the FRP was activated and used as the primary means for coordinating the response. By the time of the midwest floods, the plan was capable of being activated for specific emergency support functions (in this case, ESFs 1, 3, 5, 7, 8, 10, 11, and 12 for transportation, public works and engineering, information and planning, resource support, health and medical services, hazardous materials, food and energy).¹²⁵ This indicates a new flexibility in the execution of the FRP. Yet in California after the earthquake, questions arose about the implementation of new or revised policies and procedures.¹²⁶ According to the California report, many changes were annotated "Draft" or "Interim." So while the FRP seems to have been incorporated into the routine of state emergency agencies, dissemination of the most current changes is not universal. The Missouri report specifically asks FEMA not to "evaluate the Federal Response Plan based on the Missouri Flooding." It cites the flood relief efforts as recovery, not response and indicates that basing a response plan on a recovery operation would have long-term, negative affects.¹²⁷

However, the reports questioned neither the applicability nor authority of the FRP. Each confirmed the need for co-locating senior FEMA officials with the state EOC. All asked for delineation of the roles of the federal and state emergency agencies.

Most disturbing was the reoccurrence of many of the same observations. The flooding reports cited a lack of knowledge among FEMA employees on the FRP. Funding (percentages) remained a significant issue. (The typical breakout of financial responsibility is 75% federal, 25% state.) But the President can waive all or part of the state's contribution as he did during the Andrew disaster where the federal government paid 100% of the relief and recovery costs. Additionally, interagency coordination was reported as needing work.¹²⁸ A final issue that surfaced in all of FEMA's reports is that priorities of work must be established to provide coordinated assistance.

The FRP has gone from a "one-size-fits-all-disasters" plan, to a tailored skeleton where the signatory agencies can specify individual responsibilities among the emergency support functions and the state governments. Its existence and refinement will continue to place FEMA in a position to respond to large-scale disasters. FEMA's inspector general (IG) lauded the advances in the FRP even as early as the end of the Hurricane Andrew relief actions:

FEMA should be commended for formulating the 'Federal Response Plan' after its experiences with Hurricane Hugo and Loma Prieta. The Plan provided the framework for numerous federal agencies' response to Hurricane Andrew.¹²⁹

The military has also worked to improve its response by incorporating domestic support training tasks into its training plans. Programs of instruction for major schools include domestic support operations in the curriculum.¹³⁰ Additionally, joint and service-specific doctrine has been written to reflect both the need and the likelihood of military assistance in relief and recovery operations. But personnel turbulence and lack of familiarity with FEMA and the FRP continue to hamper the military's response for the foreseeable future.

Conclusions.

Both FEMA and DOD have markedly improved their ability to respond to disasters in the years since Hurricane Andrew. But in the same audit that praised the FRP, the FEMA IG, continued, "Andrew demonstrated that the Plan needs substantial refinements to deal with a disaster of such extraordinary magnitude, particularly in the first few days when broad assistance was so vitally needed but slow in arriving."¹³¹ While the FRP represents a quantum leap from previous federal disaster relief policies, it, like any plan, must be under constant revision and scrutiny. Feedback from the Northridge earthquake, mid-America flooding of 1993 and even the Oklahoma City bombing in 1995 indicate that FEMA appears to be moving in the right direction.

The nature of disaster relief precludes long warning periods or buildup of stockpiles, as might be expected in many military operations. While soldiers, sailors airmen and Marines have served with distinction during domestic support operations, military doctrine must continue to evolve so that it can provide better guidance for the training, deployment and sustainment of relief packages.

But as Andrew and subsequent disasters have shown, the proper application of the federal response plan by FEMA and the signatory agencies can and does work. About Hurricane Iniki response, *Newsweek* wrote, "... the worse hurricane to hit the Hawaiian Islands this century ... gave the Bush administration another chance to show it could do disaster relief right."¹³² FEMA and DOD gelled in Hawaii in their response to Iniki, and continue to provide timely effective service to America during episodes of great destruction and pain. Nothing quiets critics faster than reasonable support from their government. About Andrew, *Newsweek* said, "This outpouring of humanitarian assistance seemed to blunt the finger-pointing and recrimination that marked the first four days of Andrew's aftermath. State and local officials who had bitterly criticized the Bush administration's lack of a prompt response now hummed with praise for the gargantuan federal effort, and the *Miami Herald* applauded Bush's speech with a 'Thanks Mr. President' editorial."¹³³

South Floridians who were so unhappy during the first few days after Andrew, and the news media agencies that reported their story, have by and large tempered their harsh words for FEMA.¹³⁴ This is but one indication that when viewed objectively, FEMA performed adequately. But Andrew remains an extraordinary story. The President stepped in because he had to, based on the extent of the damage and suffering, and because the laws and policies of the day were not responsive to the immediate needs of the victims. Since Andrew, the FRP has been amended four times yet retains its basic purpose -- to streamline the procedures FEMA uses to coordinate interagency activities in disaster relief operations.

Despite the first few rough days, the relief operation for Andrew has been widely viewed a success, for both FEMA and military forces. The participants applied lessons learned from previous disasters, and the operation provided greater opportunity to reflect on the shortcomings of current procedures and doctrine. Subsequent operations for Iniki, Omar, Northridge and midwest flooding have shared similar success. But each continues to reveal the need to continue to improve and refine the FRP. Additionally, DOD must recognize the inevitability of its involvement in virtually all major domestic disasters. Based on the strides each agency has taken since 1989, both FEMA and DOD appear committed to be as prepared as possible for the next disaster.

If for no other reason, Hurricane Andrew provided the American people, as well as the responding agencies and departments, the opportunity to test and critique the nation's emergency response and relief plans (in the cases where they existed). In the areas they were found deficient (or missing), efforts have been made and resources applied to correct them. Considerable doctrine has been written, all of which incorporates lessons learned from Andrew. DOD and FEMA, among others, have bolstered training efforts for key personnel in an attempt to improve interagency cooperation and coordination. Undoubtedly, America has a better emergency response system because of lessons learned as a result of Hurricane Andrew. Equally important for DOD however, is that FEMA

remains as the lead agency for disaster relief planning. After considerable scrutiny, experts deemed DOD's successful participation in relief operations as clearly subordinate to its combat focus and efforts.

In a vignette about military operations in response to Hurricane Andrew, Joint Publication 3.0 states succinctly: This disaster relief effort demonstrated the versatility of the U.S. Armed forces. The training for war that developed and promoted initiative, ingenuity, and flexibility in leadership and conduct of operations, served the Nation well in a noncombat situation.¹³⁵

While DOD will proudly continue to participate in domestic support operations, FEMA -- heading an interagency effort of more than 27 specifically identified departments, agencies and organizations -- will control and coordinate the efforts.

Endnotes

¹ Michael J. Haggerty, *Airman*, (November 1992): 3. The 482nd Wing is a Reserve unit. The F-16s were evacuated to Shaw Air Force Base (AFB), SC and Moody AFB, GA.

² The author served on JTF Andrew as a heavy-lift helicopter company commander. This is a personal recollection.

³ *The Miami Herald*, Aug. 28, 1992, 1.

⁴ *Governor's Disaster Planning and Response Review Committee, Final Report*, January 15, 1993, Philip D. Lewis, Chairman, 1.

⁵ *Ibid.*, 2. Additionally, 32,900 acres of farmland was damaged, 31 public schools were damaged or destroyed, 59 hospitals and clinics were damaged, 3,300 miles of power lines were destroyed and 3,000 water mains were damaged. The hurricane left 86,000 out of work.

⁶ Other sources quote different damage figures. In its Inspector General's performance audit (Jan. 14, 1993), FEMA cites figures of 40 deaths, over 25,000 homes destroyed, about 130,000 damaged and 85,000 jobs lost. It goes on to calculate insured losses at \$10.7 billion, 7.

⁷ DOD used a three-phased plan to support FEMA's efforts in the wake of Hurricane Andrew. The three phases are Relief, Recovery and Reconstitution. Relief efforts focus on "immediate life support systems" such as food, water, shelter, medical services and supplies and sanitation. Recovery efforts sustain Phase I services and assist federal, state and local officials to reestablish public services. Reconstitution provides for the "return to normalcy," the return of control of the disaster area to civil authorities. *AIR*, 1. FEMA recognizes response and recovery, and organizes itself and its regions in that manner. To FEMA, "response" efforts are those immediate actions taken to save lives while "recovery" measures comprise all others. Interview with Col. Eric Jenkins, Chief of Operations and Planning Branch, Response and Recovery Division, FEMA Region VII, March 8, 1997. The "response and recovery" activity "provides for the development and maintenance of an integrated operational capability to respond to and recover from the consequences of a disaster, regardless of its cause, in partnership with other federal agencies, state and local governments, volunteer organizations and the private sector." *U.S. Government Manual*, (Washington: U.S. Government Printing Office, 1996), 533.

⁸ LTC Terry R. Youngbluth, "A Post-Hurricane Andrew Review of Trends in Department of Defense Disaster Relief Operations," (Carlisle Barracks, PA, U.S. Army War College, 1996), 2.

⁹ *Joint Task Force Andrew (JTFA) After Action Report*, as compiled in the Joint Universal Lessons Learned System (JULLS), and published in *Domestic Engagement Collection, Group Hurricane Andrew, SG House Papers, SSG AIR-046*, by the Joint Command Readiness Program, p. 1 (Hereafter, *AIR*)

¹⁰ Mr. Major P. May would act as the senior federal official until Transportation Secretary Andrew Card, the President's representative and head of the Presidential Task Force, arrived. *AIR*, 1. The FCO is the federal official responsible to coordinate all efforts for a given natural disaster, and is the president's specifically designated representative for this purpose.

¹¹ Briefing to the U.S. Army Command and General Staff College, Jan. 18, 1996, by Eric A. Jenkins, (COL, USAR), Chief, Operations and Planning Branch, FEMA Region VII. Also see Department of the Army/U.S. Marine Corps, *Domestic Support Operations, Field Manual (FM) 100-19/Flect Marine Force Manual (FMFM) 7-10*, (Washington, U.S. Government Printing Office, July 1993), 2-3.

¹² FM 100-19, *Domestic Support Operations*. (Washington: U.S. Government Printing Office, 1993). Glossary-5.

¹³ *Ibid.*

¹⁴ *AAR*. 1. The Stafford Act is Public Law 93-288 as amended by Public Law 100-707.

¹⁵ DOD Directive 3025.1, May 23, 1980. "Use of Military Resources During Peacetime Civil Emergencies within the United States, its Territories, and Possessions," states: "Consistent with DOD policies, [Secretary of the Army can] task appropriate DOD Components for necessary resources to conduct civil emergency relief operations." Paragraph F. 1., 7. This Directive was not updated until January 15, 1993. Under the provisions of the 1993 DOD Directive 3025.1, paragraph D. 3. (a) the Secretary of the Army retains tasking authority.

¹⁶ *AAR*. 2. The Secretary of the Army is DOD's executive agent for domestic support operations. Field Manual 100-19, 2-5.

¹⁷ Hurricane Andrew was the nation's worst natural disaster in terms of financial loss and property damage. *Executive Summary, Joint Task Force Andrew, United States Army After Action Report*, Sept. 30, 1992, 1.

¹⁸ "DOD has designated the United States Army Corps of Engineers (USACE) as its operating agent for planning, preparedness, and response under ESF #3 ..." Federal Response Plan, ESF #3-2.

¹⁹ Sandra K. Schneider, *Flirting with Disaster, Public Management in Crisis Situations*. (Armonk, NY: M.E. Sharpe, 1995), 101.

²⁰ *FEMA Inspector General's Performance Audit*, 1. "FEMA Management failed to systematically follow up on the more important problem areas described in [the FEMA Report of May 1991]." The report contains lessons learned from Hurricane Hugo and the Loma Prieta Earthquake.

²¹ Sandra Schneider, 89.

²² *Ibid.*, 95.

²³ "Disaster Assistance: DOD's Support for Hurricanes Andrew and Iniki and Typhoon Omar. General Accounting Office Report to the Chairman, Subcommittee on Readiness, Committee on Armed Services, House of Representatives." (Hereafter *GAO Report*) (Washington: U.S. General Accounting Office, June 1993), 25.

²⁴ James Madison, *The Federalist Papers by Alexander Hamilton, James Madison and John Jay*, ed. Garry Willis. (New York: Bantam Books, 1982, Federalist #45, 236.

²⁵ FM 100-19, 1-3. Also see Karl F. Schneider, "Disaster Relief -- Is It Spelled F-E-M-A?." (Washington: The Industrial College of the Armed Forces, 1993), 3. "Between 1868 and 1898 the Army alone participated in at least 17 disaster relief operations."

²⁶ Karl Schneider, 5. The Civil Defense Act is at 50 U.S.C. App. 2251 et seq. and the Federal Disaster Act is Pub. Law 81-875, 64 Stat. 1109. Neither addresses immediate federal response to disaster areas.

²⁷ *Ibid.* Much of this historical perspective relies on Karl Schneider's research project.

²⁸ Ibid. The Disaster Relief Act of 1970 is Pub. Law 91-606, 84 Stat. 1744.

²⁹ Ibid., 6. The Stafford Act is 42 U.S.C. 5121 et seq., and will be discussed later in the paper.

³⁰ The Federal Response Plan for Public Law 93-288, as Amended, April 1992, 1.

³¹ Ibid., vii.

³² *U.S. Government Manual*, (Washington: U.S. Government Printing Office, 1996), 533.

³³ Because effective relief efforts took four days to reach the bulk of the victims, many officials in Florida questioned the speed with which FEMA responded. (See multiple articles in the *Miami Herald*, Aug. 25-30, 1992). After action reports from DOD and GAO as well as FEMA itself, indicate clearly that FEMA personnel were in place, however ineffective they might have been.

³⁴ Field Manual 100-19, 5-10, Figure 5-5.

³⁵ From "Andrew, Iniki, Omar, FEMA Evaluation of Federal Response and Recovery Efforts." (Washington: FEMA, 1993), 1.

³⁶ Ibid., 6.

³⁷ AAR, 1. The FRP existed, but May was charged with defining specifics and executing the plan. The Federal Response Plan describes the basic mechanisms and structures by which the federal government will mobilize resources, coordinate between departments and agencies, and conduct activities to augment state and local response efforts. The Plan was signed by 26 departments and agencies and the American Red Cross in April 1992. ("Andrew, Iniki, Omar, FEMA Evaluation of Federal Response and Recovery Efforts." (Washington: FEMA, February 1993), 11.

³⁸ Ibid. An Emergency Response Team (ERT) is a group of regional representatives from the agencies that will be providing support, as well as FEMA personnel. The nearest FEMA regional office (in Hurricane Andrew's case, Atlanta) dispatches an ERT (initially an ERT-A or "advanced" ERT) to meet with the State Coordinating Officer to establish federal presence on the disaster site, assess the damage and identify assistance needed, coordinate the efforts of those agencies. The ERT-A is the nucleus of the Disaster Field Office (DFO). FM 100-19, Glossary-10, FRP, 20-21.

³⁹ Ibid., 10.

⁴⁰ *FEMA Inspector General's Performance Audit*, 11.

⁴¹ *GAO Report*, 26-27. While planning can and does occur, assembling/deployment of personnel and the forward placement of supplies and equipment are fiscally risky until the presidential disaster declaration occurs. Virtually all references cited in this monograph concede or even endorse, amendment of the Stafford Act to authorize reimbursement for proactive measures taken to reduce response time.

⁴² The FEMA tasking order becomes the "bill payer" for supporting agencies. Without the disaster declaration, FEMA's authority to task is extremely limited. See FRP, FM-1 through FM-7.

⁴³ The Director of Operations, Readiness, and Mobilization, Office of the Deputy Chief of Staff for Operations and Plans, Headquarters, Department of the Army serves as the DOMS. The DOMS is the Army staff agent for the Secretary of the Army, who, in turn, is the DOD Executive Agent for disaster

relief. The DOMS staff plans, coordinates and executes the range of DOD support for domestic support operations. The staff is multi-service, which facilitates the Secretary of the Army exercising his authority as Executive Agent over all DOD forces and agencies. Youngbluth, 3.

⁴⁴ *Ibid.*, 27.

⁴⁵ FRP, FM-4. See also Public Law 100-707. P.L. 100-707 authorizes the use of DOD resources "during the immediate aftermath of an incident which may ultimately qualify for assistance ..." There are no provisions for proactive deployments. P.L. 100-707 Sect 403(c). *United States Code Congressional and Administrative News, 100th Congress -- Second Session, 1988*, Vol. 3. (St. Paul, MN: West Publishing, 1989), 4698.

⁴⁶ *Ibid.*

⁴⁷ *FEMA Inspector General's Performance Audit*, 75.

⁴⁸ *Ibid.*, 76.

⁴⁹ *Miami Herald*, Aug. 28, 1992, p. 21A.

⁵⁰ *Miami Herald*, Aug. 29, 1992, p. 1.

⁵¹ Tom Mathews with Peter Katel, Todd Bartlett, Douglas Waller, Clara Bingham, Melinda Liu, Steven Waldman and Ginny Carroll. "What Went Wrong?" *Newsweek*, Sept. 7, 1992, 23.

⁵² *Ibid.*

⁵³ Clarence E. White, Jr., "Planning the Utilization of Federal Resources to Respond to Domestic Disasters." (Carlisle Barracks, PA: U.S. Army War College, 1996), 8. The MSCA mission includes 1. Fostering mutual assistance and support for domestic emergencies; 2. Planning, preparation and application of resources for domestic emergencies; 3. Supporting civil authorities' response to emergencies; 4. Assisting other federal departments and agencies; 5. Coordinating support from civil authorities to DOD; 6. Assisting military mobilization; and 7. Providing continuity of operations. (From DOD Directive 3025.1, 1993. This Directive was still in DRAFT at the time of execution.). White summarizes the specifics of DOD Directive 3025.1 in pages 31-34.

⁵⁴ *AAR*, 2.

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*, Enclosure 2, dated Sept. 8, 1992.

⁵⁷ "Army Forces After Action Report, Hurricane Andrew." Center for Army Lessons Learned (CALL), 16. A Joint Task Force contains representatives of each service providing units or support to the organization.

⁵⁸ Maj. Gen. Randolph House, JTFA Operations Officer (J-3), in remarks to the U.S. Army Command and General Staff College, Jan. 17, 1996.

⁵⁹ Gen. Gordon R. Sullivan, "Hurricane Andrew: An After Action Report." *Army Magazine*, January 1993, 18.

⁶⁰ *AAR*, 4.

⁶¹ AAR. 2.

⁶² AAR. Enclosure.

⁶³ Sullivan, 18.

⁶⁴ The *Posse Comitatus* Act, Title 18, U.S. Code Section 1385, prohibits the use of federal military forces to enforce or otherwise execute laws unless expressly authorized by the Constitution or Acts of Congress. There are some statutory exceptions that allow active duty soldiers to respond in emergency situations, but this "military support to civil authorities" is limited in scope. From the course syllabus to Military Operations Other Than War (C520), Command and General Staff College, Jan. 3, 1996, 101. Although federalizing troops can streamline control, it is often not favored in support operations for two other reasons. First, the governor loses his army and second there are added costs associated with federalization, such as a requirement to provide each soldier with a physical exam before releasing him or her from active duty.

⁶⁵ The Total Army Concept integrates the contributions of the Guard and Reserve as well as the active forces. It had come under some criticism during Operation Desert Shield and Storm when some Guard units did not deploy because of their training status.

⁶⁶ Field Manual 100-23-1, *Multiservice Procedures for Humanitarian Assistance Operations*, (Washington: U.S. Government Printing Office, 1994), 5-1.

⁶⁷ Sullivan, 20.

⁶⁸ For an interesting discussion of how the term "Military Operations Other than War," or MOOTW came into being, see Ann E. Story and Aryea Gottlieb, "Beyond the Range of Military Operations," in *Joint Forces Quarterly*, Autumn '95, 99-104. While numerous other operations other than war exist -- peacekeeping, non-combatant evacuation operations, protection of shipping, etc., this paper will discuss only domestic support operations as they apply to a natural disaster. Other domestic support operations include counterdrug operations and combating terrorism. See Field Manuals 100-19, *Domestic Support Operations*, 100-20, *Military Operations in Low Intensity Conflict* (1990), 100-23, *Peace Operations* (1994), and 100-23-1, *Multi-Service Procedures for Humanitarian Assistance Operations* (1995), for discussions on these types of operations.

⁶⁹ Field Manual 100-19, 1-2.

⁷⁰ *Ibid.*, 1-1.

⁷¹ "Joint Task Force Andrew, A Huge Success," Center for Army Lessons Learned, in an after action report document titled simply "Andrew AAR, JFTA Vol. 1," 1-2.

⁷² *Ibid.*, 2.

⁷³ Field Manual 100-19, 1-4 through 1-5.

⁷⁴ AAR, 2, *A Huge Success*, 5.

⁷⁵ FM 100-19, 1-5.

⁷⁶ Haggerty, 7.

⁷⁷ An anecdote told here at Command and General Staff College said that a brigade commander of the 82nd Airborne Division had a little trouble with a drug-running gang as he moved his brigade into its prospective area of operations. He made a point of personally visiting the leader of the gang, reminding him, "We're the guys who took down Panama and Noriega. If you think you want to mess with us, go ahead." (or words to that effect.) The gang caused no problems during the 82nd's stay.

⁷⁸ Haggerty, 7.

⁷⁹ Joint Publication 03, *Doctrine for Joint Operations*, V-5.

⁸⁰ Although not a "joint" publication, FM 100-23-1 is also Fleet Marine Force Reference Publication (FMFRP) 7-16, Naval Doctrine Command (NDC) "Tacnote" 3-07.6 and Air Combat Command, Pacific Air Forces Command and U.S. Air Forces Command Europe Publication 50-56. Clearly, the doctrine is widely held as valid.

⁸¹ "Joint" operations are those that involve more than one branch of U.S. military forces.

⁸² *FEMA Inspector General's Performance Audit*, 179. Unfortunately, few, if any of these recommendations had been implemented -- or even disseminated -- prior to Hurricane Andrew.

⁸³ *The Miami Herald*, Aug. 27, 16A.

⁸⁴ *The Miami Herald*, Aug. 28, 1A.

⁸⁵ GAO Report, 15.

⁸⁶ John Y. Schrader, "The Army's Role in Domestic Disaster Support. An Assessment of Policy Choices." (Santa Monica, CA: RAND, 1993), xiii, 30-31.

⁸⁷ Sandra Schneider, 151-153, *GAO Report*, 28.

⁸⁸ *Ibid.*, 153.

⁸⁹ *Ibid.*, 152.

⁹⁰ *GAO Report*, 28.

⁹¹ FM 100-19, 5-4, FM 100-23-1, 5-6.

⁹² Joint Publication 03, p. V-13 and Field Manual 100-19, 5-4.

⁹³ *Ibid.*

⁹⁴ These were later expanded to five: Cutler Ridge, Homestead, Florida City, Leisure City and Homestead AFB.

⁹⁵ *AIR*, 2.

⁹⁶ Joint Publication 03, V-13.

⁹⁷ *FEMA Inspector General's Performance Audit*, 179.

⁹⁸ That so many military manuals refer to JTF-Andrew is one indication of the use of operations in south Florida as teaching points for future domestic support operations.

⁹⁹ *FEMA Inspector General's Performance Audit*, 180.

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*, 179.

¹⁰² DOD Directive 3025.1 (1980), "Military Assistance to Civil Authorities (MACA)" and DOD Directive 3025.10 (1981), Military Support to Civil Defense (MSCD), were combined in the 1993 DOD Directive 3025.1 (MSCA). The 1993 version provided a single system to respond to attacks against the nation and other emergencies. This Directive was in draft form in August 1992.

¹⁰³ *Ibid.*

¹⁰⁴ *Ibid.*, 181.

¹⁰⁵ FEMA Inspector General's Performance Audit, 18.

¹⁰⁶ White, 5. "Participation is by agreement and consensus and is not mandated."

¹⁰⁷ *Ibid.*, 1, 18.

¹⁰⁸ *FEMA Inspector General's Performance Audit*.

¹⁰⁹ *Ibid.*

¹¹⁰ *Newsweek*, Sept. 21, 1992, 51. FEMA Region X is responsible for the State of Hawaii.

¹¹¹ *Ibid.*, 42.

¹¹² Sandra Schneider, 98.

¹¹³ See Karl Schneider, 27, and his note 57.

¹¹⁴ "Disaster Management: Improving the Nation's Response to Catastrophic Disasters." A General Accounting Office Report to Congressional Requesters. (Washington: Government Printing Office, 1993), 11-13.

¹¹⁵ Sandra Schneider, 101.

¹¹⁶ Joint Task Force Andrew, United States Army, After Action Report, Executive Summary, Sept. 30, 1992, 2.

¹¹⁷ New members, for this discussion, are those with fewer than six months on the job. This topic is also addressed in "Hurricane Andrew Lessons Learned - A Region VII Perspective," 22. This unpublished set of notes compiled by members of FEMA Region VII who participated in the relief efforts urged continuity over staff rotation.

¹¹⁸ Jenkins interview March 8, 1997.

¹¹⁹ See Field Manual 100-10, *Combat Service Support*, chapter 1.

¹²⁰ *AAR*, 10. News media are most effective portraying the condition to those outside the affected area. Victims will more likely form their opinions on the services rendered them. For a discussion of just how effective the media is on swaying/creating public opinion, see Stephen Badsey, "Modern Military Operations and the Media." (Camberly, England: Strategic and Combat Studies Institute, 1994), 1-13 and embedded references.

¹²¹ *FEMA Inspector General's Performance Audit*, 44 and 1991 report, 45.

¹²² "Chalk last" is the last aircraft in a flight. Routinely small single engine planes darted in and out of military helicopter formations, often when the helicopters were carrying slingloads. This dangerous practice was ameliorated somewhat by the airspace control efforts implemented by DOD in conjunction with the Federal Aviation Administration in Miami. Ultimately, all helicopter routes from Opa-Locka and West Palm Beach to the affected areas were to the west of Miami, over the Everglades. Flights over the Atlantic, although shorter, were discouraged by safety concerns because of the high density of planes towing banners and para-sailors along the beach. Author's experience, *AAR*.

¹²³ "Report on the Review of Federal Disaster Operations for the Northridge Earthquake." (henceforth, "Northridge Review"). (Washington: FEMA, 1994), 3.

¹²⁴ After Action Report, FEMA-1000-DR-KS, Feb. 10, 1994, 1.

¹²⁵ "The Great Flood of '93, Missouri," an After Action Report. (henceforth, "The Great Flood"), Dec. 11, 1993, 7.

¹²⁶ *Northridge Review*, 21.

¹²⁷ *The Great Flood*, 20.

¹²⁸ *Ibid.*, 84.

¹²⁹ *FEMA Inspector General's Performance Audit*, 1.

¹³⁰ Command and General Staff College Syllabus for Military Operations Other Than War, 101.

¹³¹ *FEMA Inspector General's Performance Audit*, 1.

¹³² Tom Morganthau with Donna Foote, Daniel Glick and Douglas Waller, *Newsweek*, Sept. 21, 1992, 51.

¹³³ Tom Morganthau with Karen Springen and Daniel Glick, *Newsweek*, Sept. 14, 1992, 26.

¹³⁴ White, 24.

¹³⁵ Joint Pub. 3-0, V-14.

Appendix A, The Federal Response Plan: Emergency Support Functions

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
DHHS			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		S
ICC	S											
NASA					S							
NCS		P			S		S	S				S
NRC					S					S		S
OPM							S					
TVA	S		S									S
USPS	S					S		S				

Emergency Support Function Assignment Matrix¹

* The Emergency Support Functions are explained in detail later in this appendix

P = Primary Agency: Responsible for Management of the ESF

S = Support Agency: Responsible for supporting the Primary Agency

Appendix A, The Federal Response Plan: Emergency Support Functions

ESF 1, *Transportation*, provides for the coordination of federal transportation support to state and local governmental entities, voluntary organizations, and federal agencies requiring transportation capacity to perform disaster assistance missions following a catastrophic earthquake, significant natural disaster, or other event requiring federal response. The lead agency is the **Department of Transportation (DOT)** and the support agencies are the U.S. Department of Agriculture (USDA), Department of Defense (DOD), Department of Energy (DOE), Department of State (DOS), General Services Administration (GSA), Interstate Commerce Commission (ICC), Tennessee Valley Authority (TVA), and U.S. Postal Service (USPS).

ESF 2, *Communications*, assures the provision of federal telecommunication support to federal, state, and local response efforts following a presidentially-declared emergency, major disaster, extraordinary situation and other emergencies. The lead agency is the **National Communications System (NCS)** and the support agencies are USDA, the Department of Commerce (DOC), DOD, the Department of the Interior (DOI), DOT, the Federal Communications Commission (FCC), the Federal Emergency Management Agency (FEMA) and GSA.

ESF 3, *Public Works and Engineering*, includes technical advice and evaluations, engineering services, construction management and inspection, emergency contracting, emergency repair of wastewater and solid waste facilities, and real estate support for the stated purposes. The lead agency is the **DOD (U.S. Army Corps of Engineers)**, and the support agencies are USDA, DOC, DOE, the Department of Health and Human Services (DHHS), DOI, the Department of Labor (DOL), DOT, the Department of Veterans Affairs (VA), the Environmental Protection Agency (EPA), GSA and TVA.

ESF 4, *Firefighting*, provides for detecting and suppressing wildland, rural, and urban fires resulting from, or occurring coincidentally with, a catastrophic earthquake, significant natural disaster or other event requiring federal response assistance. The lead agency is the **USDA (Forest Service)**, and the support agencies are DOC, DOD, DOI, EPA, and FEMA.

ESF 5, *Information and Planning*, provides for the collection, processing, and dissemination of information about a potential or actual disaster or emergency to facilitate the overall activities of the federal government in providing response assistance to an affected state. The lead agency is **FEMA** and the supporting agencies are USDA, DOC, DOD, the Department of Education (DOEd), DOE, DHHS, DOI, the Department of Justice (DOJ), DOT, The Department of Treasury (TREAS or DOTr), the American Red Cross (ARC), EPA, GSA, The National Aeronautic and Space Administration (NASA), NCS, the Nuclear Regulatory Commission (NRC) and the Small Business Administration (SBA)

ESF 6, *Mass Care*, includes coordinating efforts to provide sheltering, feeding, and emergency first aid following a catastrophic earthquake, significant natural disaster or other event requiring federal response assistance; to operate a Disaster Welfare Information System to collect, receive, and report information about the status of victims and assist with family reunification within the disaster area, and to coordinate bulk distribution of emergency relief

Appendix A, The Federal Response Plan: Emergency Support Functions

supplies to disaster victims following a disaster. The lead agency is the **ARC** and the support agencies are USDA, DOD, DOD, DHHS, the Department of Housing and Urban Development (DHUD), DOT, VA, FEMA, GSA, and USPS.

ESF 7, **Resource Support**, provides logistical/resource support following a catastrophic earthquake, other significant natural disaster or other event requiring federal response. The lead agency is **GSA** and the support agencies are USDA, DOC, DOD, DOE, DHHS, DOL, DOT, VA, FEMA, NCS, and the Office of Personnel Management (OPM).

ESF 8, **Health and Medical Services**, provides coordination assistance to supplement state and local resources to respond to public health and medical care needs following a significant natural disaster or man-made event. The lead agency is the **DHHS (U.S. Public Health Service)**, and the support agencies are USDA, DOD, DOJ, DOT, VA, the Agency for International Development (AID), ARC, EPA, FEMA, GSA, NCS, and USPS.

ESF 9, **Urban Search and Rescue**, describes the use of federal urban search and rescue assets following an event requiring a federal response. The lead agency is **FEMA** and the supporting agencies are USDA, DOD, DHHS, DOL, DOT, AID, EPA, and GSA. (Change 2 to the FRP, effective February 3, 1995, installed FEMA as the primary agency for ESF 9, replacing DOD. FEMA maintains an Urban Search and Rescue program nationally, and is in continuous contact with local and state agencies that habitually conduct rescue operations and possess specialized equipment and capabilities.

ESF 10, **Hazardous Materials**, provides federal support to state and local governments in response to actual or potential discharge and/or release of hazardous materials following a catastrophic earthquake or other catastrophic disaster. The lead agency is **EPA** and the support agencies are USDA, DOD, DOE, DHHS, DOI, DOJ, DOL, DOS, DOT, FEMA, GSA, and NRC.

ESF 11, **Food**, identifies, secures, and arranges for the transportation of food assistance to affected areas following a major disaster or emergency or other event requiring federal response. The lead agency is **USDA (Food and Nutrition Service)**, and the support agencies are DOD, DHHS, DOT, ARC, EPA, and FEMA.

ESF 12, **Energy**, facilitates restoration of the nation's energy system following a catastrophic earthquake, natural disaster, or other significant event requiring federal response. The lead agency is **DOE** and the support agencies are USDA, DOD, DOS, DOT, GSA, NCS, NRC, and TVA. In February 1995, Change 4 to the FRP updated this ESF.²

¹ FRP, 14.

² Federal Emergency Management Agency. *The Federal Response Plan*. (Washington: U.S. Government Printing Office, 1992, with changes).

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