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DISASTER MANAGEMENT

Recent Disasters Demonstrate
the Need to Improve the
Nation's Response Strategy

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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to be here to discuss our work on how the nation responds to disasters. Several recent catastrophes--especially Hurricane Andrew in South Florida--have led to growing dissatisfaction with the nation's system for responding to large disasters. As a result, a number of members of Congress asked us to examine the adequacy of the federal strategy for responding to catastrophic disasters and to develop solutions for improving it. We have presented the results of our work at several recent hearings this year, and expect to issue a final report soon summarizing our conclusions on disaster management and recommendations for fundamental changes we believe are essential in the federal response to disasters.¹ My statement today presents the final results of our work and the complete set of recommendations we have made to the President and the Federal Emergency Management Agency (FEMA) over the course of this review. I will also discuss two matters we have presented for Congressional consideration.

Over the past ten years, FEMA has responded, on average, to about 35 disasters per year. Few of these--less than one a year--can be considered truly catastrophic, which we define as any disaster that overwhelms the ability of state, local, and volunteer agencies to adequately provide victims with such life-sustaining mass care services as food, shelter, and medical assistance within the first 12 to 24 hours.

In summary, we found that the federal strategy for responding to catastrophic disasters is deficient because it lacks provisions for the federal government to (1) comprehensively assess damage and the corresponding needs of disaster victims and (2) provide food, shelter, and other essential services when the needs of disaster victims outstrip the resources of the private voluntary community. Moreover, the federal strategy does not allow adequate preparedness when there is a warning that a disaster will strike because preparatory activities are not clearly authorized until the President has issued a disaster declaration. To prepare for a disaster, FEMA could make better use both of its own resources as well as those it provides to state and local governments to improve overall preparedness for catastrophic disasters. Finally, and perhaps most importantly, we found that the person directing the federal response to a catastrophic disaster must explicitly and demonstrably have the authority of the President in managing the disaster.

In the case of Hurricane Andrew, the combination of these factors resulted in such shortcomings as inadequate damage assessments,

¹Disaster Management: Recent Disasters Demonstrate the Need to Improve the Nation's Response Strategy (GAO/T-RCED-93-4, Jan. 27, 1993, GAO/T-RCED-93-13, Mar. 2, 1993, and GAO/T-RCED-93-20, May 18, 1993).

inaccurate estimates of needed services, and miscommunication and confusion at all levels of government--all of which slowed the delivery of services vital to disaster victims. Hurricane Andrew also demonstrated that for large, catastrophic disasters, the military has the capability to respond to the immediate needs of disaster victims in a highly effective manner. However, the Federal Response Plan has no explicit provisions for turning to the U.S. military to quickly provide this kind of assistance to victims of catastrophic disasters. In addition, at a time when its force structure is being reduced, DOD is prohibited from turning to the Reserves to respond to catastrophic disasters. If DOD is committed elsewhere in the world when a catastrophic disaster strikes, it might not be able to provide the level of assistance it did for Hurricane Andrew without authority to use the Reserves.

As devastating as Hurricane Andrew was to South Florida--resulting in the largest economic loss from a natural disaster in U.S. history (about \$25 billion)--experts agree we were fortunate it was not far worse both in terms of loss of life and monetary damage. These same experts predict we are entering a period of increased hurricane activity and that we need to take action today at the local, state, and federal levels to prevent greater losses of life and property. Further, the nation may well face disasters or emergencies that could affect even more people than Hurricane Andrew. We could experience stronger hurricanes and earthquakes, radiological or hazardous material releases, or terrorist and nuclear attacks.

As a result, we have made a number of recommendations aimed at ensuring that the federal government has both the capacity and the leadership to effectively meet the life-sustaining needs of victims of catastrophic disasters when all other responders are unable to do so. Among these are:

1. The President should designate a senior official in the White House to oversee the initial federal response to catastrophic disasters. This official should also have ongoing responsibility for oversight of FEMA and other federal agencies' efforts to plan, prepare for, and respond to catastrophic disasters.
2. FEMA should establish a disaster unit to independently assess damage and estimate response needs following a catastrophic disaster.
3. FEMA, with guidance from the Congress, also must take action to improve the way it (1) decides whether state and local governments need assistance, (2) uses existing authority to effectively provide assistance, and (3) enhances state and local preparedness in order to minimize the amount of federal assistance needed.

In addition, we noted that the Congress should consider

1. Giving FEMA and other federal agencies explicit authority to take actions to prepare for catastrophic disasters when there is warning, and
2. Removing statutory restrictions on DOD's authority to activate reserve units for catastrophic disaster relief.

BACKGROUND, SCOPE, AND METHODOLOGY

FEMA was established in 1979 during the Carter Administration to consolidate federal emergency preparedness, mitigation, and response activities. FEMA has a number of responsibilities, including the coordination of civil defense and civil emergency planning and the coordination of federal disaster relief. The disasters and emergencies to which FEMA may respond include floods, hurricanes, earthquakes, hazardous material accidents, nuclear accidents, and biological, chemical, and nuclear attacks.

The fundamental principles that guided FEMA's creation included implementing the disaster priorities of the President; drawing, to the extent possible, on the resources and missions of existing federal, state, and local agencies; and emphasizing hazard mitigation and state and local preparedness--thereby minimizing the need for federal intervention. Consequently, FEMA's primary strategy for coping with disasters has been to (1) enhance the capability of state and local governments to respond to disasters, (2) coordinate with 26 other federal agencies that provide resources to respond to disasters, (3) give federal assistance directly to citizens recovering from disasters, (4) grant financial assistance to state and local governments, and (5) provide leadership--through grants, flood plain management, and other activities--for hazard mitigation. FEMA conducts its disaster response and civil defense activities primarily under the authorities of the Robert T. Stafford Disaster Relief and Emergency Assistance Act and the Federal Civil Defense Act of 1950, as amended.

The Federal Response Plan is FEMA's blueprint for responding to all disasters and emergencies. The plan is a cooperative agreement signed by 26 federal agencies and the American Red Cross for providing services when there is a need for federal response assistance following any type of disaster or emergency. The present version of the plan--developed following dissatisfaction with the response to Hurricane Hugo in 1989--was completed in April 1992. Hurricane Andrew was the first time the plan was fully used.

The plan outlines a functional approach to federal response and groups the types of federal assistance that may be needed into 12 categories, such as food, health and medical services, transportation, and communications. For each function, one agency

is charged with being the primary provider of the service, with several other agencies responsible for supporting the primary agency. For the mass care functions (such as food and shelter), the primary agency is the American Red Cross.

In order for FEMA to activate the Federal Response Plan and for a state to receive life-sustaining and other services from the federal government, the Stafford Act requires a governor to obtain a presidential declaration that a major disaster or emergency exists. The governor's request must be based on a finding that the scope of the disaster or emergency is beyond the state's ability to respond. After the President declares a disaster, FEMA supplements the efforts and resources of state and local governments and voluntary relief agencies, which are expected to be the first responders when a disaster strikes. Over the past 10 years, presidents have declared an average of about 35 disasters annually. FEMA officials stated that catastrophic disasters requiring life-sustaining services from the federal government occur, at most, one to two times a year in the United States.

We reviewed the organizational structure and disaster response activities of FEMA. We also reviewed the federal, state, local, and volunteer response to Hurricane Andrew in Florida and Louisiana and Hurricane Iniki in Hawaii. Most of our work focused on South Florida because of the tremendous amount of damage resulting from Hurricane Andrew. At each location we met with representatives from state and local emergency management organizations. We also consulted with a panel of experts who represented a cross section of views on disaster response. These experts included a number of former federal agency heads and other high-level officials from the Department of Defense (DOD), FEMA, and FEMA's predecessor agencies; an emergency medical program director; state emergency management directors; and members of academia specializing in intergovernmental relations during disaster response.

As requested by the Congress, we focused our review on the immediate response to catastrophic disasters. Therefore, we address neither long-term recovery activities for catastrophic disasters nor any aspect of the response to less severe disasters, which, as I noted earlier, constitute the bulk of FEMA's response activities.

RESPONSE TO HURRICANE ANDREW IN SOUTH FLORIDA REVEALS INADEQUACIES

Our review of Hurricanes Andrew and Iniki uncovered several problems with the response efforts, although virtually all of these were revealed in South Florida because of the magnitude of that disaster. Specifically, we found that the Federal Response Plan is inadequate for dealing with catastrophic disasters such as Hurricane Andrew in South Florida because, among other things, it lacks provisions for a comprehensive assessment of damages and the

corresponding needs of disaster victims. In addition, the response in South Florida suffered from miscommunication and confusion at all levels of government--which slowed the delivery of services vital to disaster victims.

In contrast, we found the response to Hurricane Andrew in Louisiana and Hurricane Iniki in Hawaii to be more effective. But most of the improvements, such as sending supplies to the island of Kauai before local officials requested them, were introduced in an ad hoc manner--rather than as part of an orderly, planned response to catastrophic disasters. We have provided a more detailed discussion of our findings in the initial responses to Hurricanes Andrew and Iniki in appendix I.

Implications of an Inadequate Federal Response Strategy for Future Disasters

In the long term, the nation is likely to face far greater disasters than Hurricane Andrew. Recent predictions indicate that future hurricanes will be more powerful and destructive, in part because of changing weather patterns and increased development in vulnerable coastal areas. We also could face terrorist and nuclear hazards, biological disasters, and large earthquakes--all threats that government officials must take seriously. To illustrate, if another earthquake occurred near Memphis, Tennessee, similar to one that occurred there in the winter of 1811-12 on the New Madrid fault and exceeded 8 on the Richter scale, thousands of people could be hurt and 60 percent of the natural gas supply to the Northeast could be disrupted.

Therefore, we believe the federal government needs to take three important actions to improve the national response system for catastrophic disasters. First, establishing a FEMA disaster unit would improve federal decision making on providing help to state and local governments, both during actual disaster response and during day-to-day preparations for such disasters. Second, increasing reliance on DOD to provide mass care would strengthen the federal role following a catastrophic disaster when there is a gap between what the private sector can provide and what disaster victims need. Third, ensuring presidential involvement and leadership before and after catastrophic disasters strike would improve both federal preparedness and response.

Although my statement today highlights improvements we believe are necessary in the federal response to disasters, state and local governments are integral parts of an effective national disaster response system. The success or failure of any changes in the federal role in that system will always be heavily affected by the efforts of state and local responders. Because we believe state and local governments should remain to the extent possible the first responders to all disasters, FEMA needs to enhance their level of preparedness and response capabilities so that they are as

effective as possible. FEMA also needs to ensure that state and local governments contribute their "fair share" to disaster response, commensurate with their level of preparedness, so that the use of federal resources is minimized.

In prior testimonies during this review, we have recommended ways FEMA can make better use of state and local resources available to respond to catastrophic disasters. These include increasing the flexibility afforded states in the use of civil defense funds; providing training focused on catastrophic disaster response; and improving oversight of state and local readiness. However, FEMA should recognize that factors particular to each state, such as the support of the governor and state legislature for emergency management, perceived threat of a disaster, and the state's fiscal soundness, also affect levels of preparedness. We have provided a more detailed discussion of these issues in appendix II of my statement.

I would now like to discuss each of the three areas in which we suggest improvements in the federal strategy for disaster preparedness and response.

ESTABLISHING A FEMA DISASTER UNIT WOULD IMPROVE FEDERAL DECISION MAKING ON PROVIDING HELP

Given the shortcomings we saw primarily in South Florida, we believe FEMA needs a disaster unit whose sole mission is planning for and responding to catastrophic disasters. This unit's mission would be twofold: (1) just before (when there is warning) or immediately following a disaster, it would be charged with such duties as estimating the extent of damage and relief needs² and (2) when not actively engaged in disaster response, it would have an ongoing responsibility to plan for and predict the effects of a variety of catastrophic disasters. This unit would consist of a core staff located in FEMA plus additional staff in participating federal agencies (such as DOD and the Public Health Service) serving as permanent liaisons to the unit.

In order to ensure the commitment of the entire federal government, both in day-to-day preparation and during actual disasters, the unit should work closely with a designated White House official. I will elaborate later in my statement on the roles and

²The federal government is explicitly authorized to appraise the types of relief needed after a disaster is declared. However, as we pointed out in an earlier report, Disaster Assistance: Federal, State, and Local Response to Natural Disasters Need Improvement (GAO/RCED-91-43, Mar. 6, 1991), legislative action may be needed to deploy staff to a disaster area prior to a major disaster declaration.

responsibilities we believe the White House should have in disaster preparedness and response.

What the Disaster Unit Will Do

In order to be better prepared for catastrophic disasters, FEMA needs a unit that has responsibility for immediate action when a catastrophic disaster has happened or is imminent, as well as day-to-day responsibilities for predicting and planning for the effects of catastrophic disasters. Specifically, the disaster unit should be able to quickly deploy FEMA and other federal agency staff to the disaster area to conduct comprehensive damage assessments. By doing so, the disaster unit would then translate its damage assessments and any other relevant information about the disaster area into estimates of immediate response needs. These estimates should include the extent to which FEMA and the other federal participants can meet those needs and how soon they could be met.

An integral component of this analysis would be FEMA's estimate of the state and local governments' preparedness and capability to respond to the disaster. The end result of all these assessments would be concrete recommendations to the governor of a state on the amount, type, and cost of federal assistance that should be provided.

The disaster unit should coordinate the initial response phase of the federal role until state and local capabilities have reconstituted themselves and normal recovery operations can begin. As soon as state and local responders can resume their roles, the disaster unit's role would end, and the transition to recovery would begin.

A rapid response requires day-to-day efforts to predict and plan for catastrophic disasters. These include refining the capability to predict and analyze the impact of a wide variety of disasters using such techniques as modeling, demographic analysis (including mapping), gaming, and other simulations. Using its predictions and analysis, the disaster unit would help prepare FEMA and other federal agencies for a rapid response by leading exercises devoted to planning and executing the federal response. In addition, the disaster unit would incorporate FEMA's assessments of individual states' preparedness and vulnerability into both its plans and response strategies. To do this, the unit would work with the FEMA staff who already review individual state emergency operating plans on an annual basis. These staff look for compliance with requirements for less-than-catastrophic disasters. This information, coupled with the disaster unit's added analysis, would be incorporated into the unit's day-to-day planning and immediate response strategies.

FEMA Has the Core of the Resources Needed for the Disaster Unit

We believe that the core of the disaster unit should be housed within FEMA, combining existing staff who have disaster response experience with existing staff and resources from FEMA's National Preparedness Directorate (NP). NP is currently assigned the mission of "maintaining the federal government's capability to deliver effective emergency management during all phases of any national security emergency." The Directorate includes about 900 employees and has an annual appropriation of about \$100 million--significant assets that could be used more effectively to help guide the federal government's response to catastrophic natural disasters, especially in light of the changing nature of national security emergencies.

In general, the Directorate has many of the people and resources that could help form the nucleus of the disaster unit I referred to earlier. Its current rapid response mission places a premium on people with such skills as strategic and tactical planning, logistics, command and control, and communications. Its resources include communications, transportation, life support, and sophisticated computer modeling equipment. Through constant planning and exercising, the Directorate maintains a high level of readiness and is, therefore, able to instantly deploy people and resources from a number of locations to anywhere in the United States.

Reorganizing FEMA Is Crucial to the Disaster Unit's Success

In order to successfully develop the capabilities we envision for it, FEMA's disaster unit must permanently combine staff and resources. The two FEMA directorates whose resources would form the disaster unit--National Preparedness and State and Local Programs and Support--have historically not worked well together and have pursued their missions in isolation from one another. As a result, we do not believe anything short of a complete reorganization can overcome the institutional and cultural barriers that have prevented effective cooperation between the two directorates.

Other Federal Agencies Are Part of the Disaster Unit

Although FEMA has the core of the resources needed for a disaster unit, other federal agencies also possess assets essential for the rapid federal response such a unit should guide. Other federal agencies should designate staff who, as part of their day-to-day responsibilities, will serve as liaisons to FEMA's disaster unit. Like the core FEMA members of the unit, other agencies' staff will have dual responsibilities: planning and preparedness activities

conducted when no disaster response is ongoing and directing the resources of their respective agencies during actual responses to catastrophic disasters. The disaster unit will develop working agreements and operational procedures with other federal agencies to draw on their existing resources and capabilities as needed.

We envision that each agency participating in this team would probably have to designate just one to two staff to serve as liaison(s) to the disaster unit. These staff, in this capacity, would serve two functions: (1) in the initial response to catastrophic disasters, they would direct the resources of their respective agencies on the basis of damage and needs assessments, analysis, and direction from the FEMA-based disaster unit; and (2) periodically, they would participate with FEMA in the kinds of planning exercises and simulations discussed earlier to improve their own preparedness and response capability. For this second function, all federal agencies with disaster response activities would help develop and participate in FEMA's exercises and simulations in order to better prepare them for the demands their liaisons will be placing on them during an actual catastrophic disaster.

We have identified the following resources and/or capabilities that already exist in other federal agencies.

Table 1: Resources and Capabilities of Federal Agencies for Disaster Response

Agency	Resource, capability
Department of Defense	Damage assessment; mass care (food, mobile kitchens, medical facilities, shelter); transportation; debris removal; communications
Forest Service	Damage assessment; incident command teams; transportation; short-term food supplies (mobile feeding units); logistics support; debris removal (chain saw crews)
National Aeronautics and Space Administration (NASA)	Aerial reconnaissance (for damage assessment)
Public Health Service	Disaster Medical Assistance Teams
Department of Energy	Emergency power and fuel

FEMA Would Only Mobilize and Deploy the Disaster Unit for Catastrophic Disasters

The disaster unit's mobilization and deployment should begin when a disaster is imminent or has happened. At this time, the unit would be actively collecting information about actual or likely damages and needs. When the disaster unit collects enough information to determine that a disaster is truly catastrophic, it should function as an initial response management team. Unlike FEMA's normal response for less-than-catastrophic disasters, mobilizing and deploying the disaster unit should not be contingent on a presidential disaster declaration. Mobilization and deployment is most likely to precede such declarations, and in no case should the disaster unit be constrained from initiating response activities where it sees or has identified immediate, unmet needs.³

FEMA should mobilize and deploy the disaster unit--and thus decide that a catastrophic disaster is imminent or has happened--on the basis of two broad considerations: past experience and pre-disaster planning, modeling, and vulnerability assessments.

³However, as we noted earlier, legislative action may be needed to authorize FEMA to deploy staff to the disaster area prior to a major disaster declaration.

FEMA already has significant experience in dealing with a variety of disasters for which it can estimate beforehand the extent of damage and the immediate response needs the affected areas will have. These kinds of disasters include some for which there is advance warning, such as hurricanes, typhoons, and widespread flooding, as well as unexpected disasters, such as tornadoes and earthquakes. This experience has generated criteria for when a disaster unit would be used. These include the expected magnitude of the disaster, accessibility of the affected area(s), potential for loss of life and/or shelter, the capability of state and local governments to respond, and the potential for state and local response capabilities to be destroyed.

FEMA faces a special challenge in planning how it will activate such a unit when it is faced with a disaster with which it has little or no experience, such as radiological or hazardous material releases. In these cases, it is especially critical that this disaster unit conduct (as part of day-to-day operations) planning exercises, modeling, demographic analysis, mapping, and other simulation techniques so that the unit can predict the impact of the kinds of disasters FEMA has not yet faced. Using these analyses, FEMA could then develop and plan for additional criteria for activating its disaster unit and test these criteria in the exercises it conducts with other federal agencies.

INCREASING RELIANCE ON DOD
TO PROVIDE MASS CARE COULD STRENGTHEN
THE FEDERAL RESPONSE TO CATASTROPHIC DISASTERS

The key to successfully responding to a catastrophic disaster is rendering sufficient life-sustaining assistance, such as food, water, shelter, and medical care, and dealing with mass psychological trauma within a short period of time. With the current disaster response system's reliance on state- and locally-identified needs, FEMA cannot ensure a timely or adequate response. Furthermore, FEMA lacks procedures that specifically guide how the federal government will offer mass care when state, local, and volunteer efforts fall short.

The responses to Hurricanes Andrew and Iniki demonstrated the effectiveness of the military in providing a variety of supplies and services and in establishing the infrastructure necessary to restore order and meet immediate needs of victims. However, neither the responses to those storms nor the experts with whom we consulted indicated DOD should have overall management responsibility for disaster relief and recovery.

Often, when a catastrophic disaster leaves a gap between what volunteers can provide and the needs of disaster victims, DOD is the only organization capable of providing, transporting, and distributing sufficient quantities of the items needed to fill that gap. For example:

- DOD has trained medical and engineering personnel, mobile medical units, storehouses of food and temporary shelters, contingency planning skills, command capability, and other requirements for mass care, as well as the transportation to deploy them. Building up response capability in other organizations, such as FEMA, would be redundant.
- Catastrophic relief activities mirror some of DOD's wartime support missions. Soldiers are trained for similar missions and catastrophic disaster relief provides soldiers with additional training.
- Catastrophic disaster responses, such as those for Hurricane Andrew, are smaller than many military operations and do not significantly affect DOD's military readiness in the short term.

The American Red Cross currently is responsible for providing mass care as well as for coordinating support for this function with DOD, the U.S. Department of Agriculture, and other voluntary organizations. For all but the most severe catastrophic disasters, the Red Cross and its large network of volunteers may be well suited to meet this responsibility. In fact, in Louisiana, the state and volunteer agencies were able to provide almost all of the mass care services needed with relatively little federal assistance.

However, for disasters as devastating as Hurricane Andrew in South Florida, the needs of disaster victims are so overwhelming that there is a gap between those needs and the level of resources the Red Cross and other voluntary organizations can provide. Although the Red Cross responded immediately to the needs of Hurricane Andrew's victims--sheltering those who evacuated South Florida and providing some mass care after the storm--a gap between immediate need and available private voluntary resources was inevitable for a disaster of this magnitude. Only DOD can quickly escalate the response if, as was the case with Hurricane Andrew, the destruction and need for mass care is far greater than first anticipated.

Using FEMA's Disaster Unit to Obtain Mass Care Relief from DOD

While we clearly see a major role for DOD in providing mass care, we do not advocate turning over the entire disaster response, relief, and recovery operations to the military. If FEMA had the disaster unit we discussed earlier, that unit would be in the best position to determine when to turn to the military to play a major role in providing mass care to catastrophic disaster victims. Because the disaster unit will translate damage assessments into estimates of immediate response needs and determine the extent to which FEMA and other federal participants (including the Red Cross)

can meet those needs, the unit will be in the best position to determine when mass care needs are outstripping the private sector's capacity to respond. Therefore, the disaster unit should decide when to recommend to the state that increased military assistance be provided.

Retaining Civilian Control Over Any Domestic DOD Mission

DOD's role in disaster response needs to remain under the direction of a civilian authority outside of the Department for two important reasons: (1) DOD's first and foremost responsibility is to deal with those military matters affecting national security; a full-time DOD mission of managing disaster preparedness and relief could detract from the Department's primary responsibility; and (2) DOD officials strongly believe, and we agree, that assuming overall management responsibility could create the impression that the military is attempting to make or direct domestic policy, which runs contrary to principles that have guided the military's role in the United States. Throughout our review, military officials repeatedly emphasized their willingness to work for and support a civilian-led disaster response.

Preparing Other Federal Agencies to Respond When DOD's Response Role Must Be Limited

Any increased role that DOD might be assigned in disaster response must be accompanied by appropriate and sufficient backup capabilities elsewhere in the federal government in the event DOD is engaged in responding to world events at the time. DOD officials noted that responding to a catastrophic disaster will not adversely affect short-term military readiness. However, if Hurricane Andrew had occurred during Operation Desert Storm, DOD would not have been able to provide as much airlift to transport personnel, equipment, and relief supplies to the disaster area. It also is questionable whether it could have provided the same number of personnel to assist in disaster relief efforts.

During such times, the federal response strategy needs to be able to rely on another federal agency, such as the Forest Service, to step in. Forest Service officials told us that their resources directed to fighting forest fires could also lead an initial response management team. Using the Incident Command System model,⁴ the Forest Service is able to deploy an incident command

⁴The Incident Command System is a management tool consisting of procedures for controlling personnel, facilities, equipment, and communications at the scene of an emergency. Originally developed for wildland settings, it has evolved into an "all-risk" system appropriate for all types of emergencies.

team quickly and activate pre-negotiated contracts for support services such as transportation and mobile kitchens.

An additional factor affecting the response capability of DOD is the reduction in its forces. To some extent, this limitation could be overcome through greater use of the Reserves, which possess many of the skills and services that are needed for effective disaster relief operations. Under current law, however, the Reserves may be asked to volunteer to perform disaster relief operations but may not be required to do so.

Improving Preparation by All Federal Agencies

To respond more quickly, DOD and other federal agencies also need to mobilize resources and deploy personnel in anticipation of a catastrophe. Federal response time could be reduced by encouraging agencies to do as much advance preparation as possible prior to a disaster declaration--and even earlier for disasters, such as hurricanes, where some warning exists. However, current law does not explicitly authorize such activities. Therefore, federal agencies may fail to undertake advance preparations because of uncertainty over whether costs incurred before a disaster declaration will ultimately be reimbursed by FEMA. For example, DOD officials told us that they take some actions to prepare for a disaster when there is warning--such as identifying quantities, locations, and transportation requirements for mass care supplies--but they take no additional measures because the Department might have to pay for the expenses if FEMA ultimately does not request its assistance.

ENSURING PRESIDENTIAL INVOLVEMENT AND LEADERSHIP BEFORE AND AFTER CATASTROPHIC DISASTERS STRIKE

Because the necessary federal response to catastrophic disasters is so fundamentally different--bigger and more urgent--than to less severe events, the person or organization directing the federal response must explicitly and demonstrably have the authority of the President in managing the disaster. The presence of presidential leadership creates a powerful, meaningful perception that the federal government recognizes an event is catastrophic, is in control, and is going to use every means necessary to meet the immediate mass care needs of disaster victims. Further, presidential leadership during times when the federal government is not engaged in responding to a catastrophic disaster creates an ongoing sense of the importance of emergency management responsibilities that translates into a better commitment to preparedness and response by all federal agencies involved.

The best way to underscore the commitment of the President is to place responsibility for catastrophic disaster preparedness and response with a key official in the White House. Doing so would institutionalize the direct presidential involvement that has

happened on an ad hoc basis in two recent disasters. Further, this organizational arrangement can be a tool by which emergency management responsibilities throughout the government continually receive heightened levels of attention, not just in times of catastrophic disasters.

White House Leadership for Catastrophic Disasters

The Director of FEMA should work closely with a designated White House official, both during a catastrophic disaster as well as during day-to-day operations to ensure that FEMA and all involved federal agencies are meeting preparedness requirements for catastrophic disasters. When an event such as Hurricane Andrew has happened or is imminent, the Director should notify the White House official that (1) a catastrophic disaster has occurred or is likely to occur, (2) the stricken area will almost surely require a great deal of immediate and long-term federal assistance, and (3) in the Director's judgment the disaster unit should deploy to the affected state(s), assess the situation, and, if necessary, direct the federal resources needed to meet the immediate mass care needs of disaster victims.

The designated White House official will then actively monitor all federal response efforts to ensure that federal responders treat the catastrophe as their immediate top priority and to determine when backup response capabilities, such as we discussed in reference to the Forest Service, are required. In order to do so, this designated official will rely extensively on the FEMA Director and the staff of the disaster unit deployed to the affected area.

Providing White House Leadership for FEMA's Daily Operations

The designated White House official should not only monitor the initial federal response to catastrophic disasters but also have ongoing responsibility for oversight of FEMA and other federal agencies' efforts to plan, prepare for, and respond to such disasters. This ongoing leadership would offer the disaster unit two key benefits:

- First, it would ensure on a continuing basis the commitment and cooperation of other federal agencies in FEMA's efforts to prepare all federal responders for catastrophic disasters. FEMA would no longer be forced to rely on its powers of persuasion to get the commitment and cooperation it needs from other federal agencies.
- Second, it would familiarize the White House official with the manner in which the federal government plans for and responds to such disasters. This official would then have a working knowledge of immediate response and recovery

activities. In contrast to a cabinet secretary who is selected on an ad hoc basis to manage the federal response (as happened with Hurricane Andrew), the White House official would probably have had ample time to learn and rehearse this response role before actually facing a catastrophic disaster. This ongoing responsibility would not be a full-time effort but should ensure commitment and cooperation across the federal government to anticipate, prepare for, and respond to catastrophic disasters.

Ultimately, the choice for which official should have this responsibility is the prerogative of the President. However, we believe the primary criteria that must be used in designating this official are twofold: (1) the official must have sufficient public recognition so that he or she is perceived as having the authority and attention of the President in managing the disaster; and (2) the official must have access to and the confidence of the President.

CONCLUSIONS

In responding to catastrophic disasters, state, local, and volunteer agencies should do as much as possible before turning to the federal government for help. However, it is essential to recognize that the magnitude of certain disasters, such as Hurricane Andrew, will quickly outstrip the capacity of all but the federal government to respond in the critical first 12 to 24 hours with life-sustaining mass care. If we do not recognize the extraordinary demands a catastrophic disaster places on all levels of government and build that recognition into appropriate legislative authority, planning exercises, operational procedures, and response strategies, we run the risk of far greater loss of life than we saw in South Florida, Louisiana, and Hawaii.

We earlier noted that we found a consensus among a wide variety of officials that the federal government must be prepared to rapidly respond when a disaster outstrips the resources of the state, local, and private voluntary components of our disaster response system. Unfortunately, the federal government is not yet prepared to be a rapid responder. Therefore, we believe the time is right for a fundamental reexamination of the manner in which we provide federal leadership to plan, prepare for, and respond to catastrophic disasters.

Tornadoes and hurricanes occur every summer and fall--just months away--while other types of disasters could happen at any time. Beyond the problems experienced by disaster victims, the response to Hurricane Andrew in South Florida is even more troubling in light of the kinds of disasters with greater damage and loss of life that we have not yet faced but that experts tell us may well happen. We could experience stronger hurricanes, earthquakes, radiological or hazardous material releases, or terrorist and

nuclear attacks. As a result, we believe there is now a particularly crucial window of opportunity to dramatically reshape FEMA. The steps we have proposed represent a substantial improvement in and a reassessment of the federal response to catastrophic disasters and, we believe, should be the foundation for changes that you and the Administration consider.

I noted in my introduction that we had presented the results of our work at several hearings earlier this year. Over the course of those hearings, we have made the following recommendations to the President and FEMA, in addition to presenting two matters for Congressional consideration:

RECOMMENDATION TO THE PRESIDENT

The President should

- Designate a senior official in the White House to oversee federal preparedness for and responses to catastrophic disasters. This official should not only monitor the initial federal response to catastrophic disasters but also have ongoing responsibility for oversight of FEMA and other federal agencies' efforts to plan, prepare for and respond to such disasters.

RECOMMENDATIONS TO FEMA

The federal government needs to develop a catastrophic disaster response capability. Accordingly, FEMA should

- Establish a disaster unit headquartered in FEMA. This unit would be comprised of a core of FEMA staff and would be augmented by resources and staff from other key federal agencies. The unit would--using analyses of state and local governments' capability and preparedness to respond to catastrophic disasters--predict, plan for, and assess the damage resulting from catastrophic disasters. The unit would also translate its damage assessments into estimates of immediate response needs, including the extent to which FEMA and the other federal participants can meet those needs. It also would provide up-to-date information to the White House so that the president's designated official is able to effectively oversee the federal response. On the basis of its assessments and needs determinations, the unit would make concrete recommendations to the governor of the affected state regarding the amount, type, and cost of federal assistance that should be sought. The disaster unit should direct any needed federal relief effort.
- Improve its catastrophic disaster response capability by using existing authority to aggressively respond to catastrophic disasters, assessing the extent of damage, and

then actively advising state and local officials of identified needs and the federal resources available to address them, as well as the extent to which DOD resources will be needed to supplement those of the Red Cross in meeting mass care needs.

- Enhance the capacity of state and local governments to respond to catastrophic disasters by (1) continuing to give them increasing flexibility to match grant funding with individual response needs, (2) upgrading training and exercises specifically geared towards catastrophic disaster response, and (3) assessing each state's preparedness for catastrophic disaster response.

MATTERS FOR CONGRESSIONAL CONSIDERATION

The Congress should consider

- Giving FEMA and other federal agencies explicit authority to take actions to prepare for catastrophic disasters when there is warning, and
- Removing statutory restrictions on DOD's authority to activate reserve units for catastrophic disaster relief.

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Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or Members of the Committee may have.

RESPONSE TO HURRICANE ANDREW IN
SOUTH FLORIDA REVEALS INADEQUACIES

INADEQUACIES IN FEMA'S FEDERAL RESPONSE PLAN

Hurricane Andrew in South Florida showed that FEMA's response strategy, implemented through the Federal Response Plan, is not adequate for dealing with catastrophic disasters. The plan is based upon the premise that an increasing number of the 12 functional response areas will be activated, depending on the gravity of the disaster. Although all of the plan's 12 functional areas were activated for Hurricane Andrew, the response was neither immediate nor adequate. The key reasons for the plan's failure included the absence of provisions for rapid assessment of the disaster's magnitude and the lack of a specific functional responsibility for escalating the federal response to meet the extraordinary requirements of a catastrophic disaster.

The federal response to Hurricane Hugo in 1989 highlighted the fact that the federal government may be the only entity capable of quickly providing the large amounts of life-sustaining services needed immediately after a catastrophic disaster. For example, FEMA's own internal evaluation of the lessons learned from Hurricane Hugo noted that "it is quite clear that in an extraordinary or catastrophic event that overwhelms the state, the federal government may be the principal responder."⁵ In addition, the report recommended that a plan be developed to address the need for a federal response to significant natural disasters.

The Federal Response Plan developed by FEMA after Hurricane Hugo, however, does not have a support function for damage and needs assessments, even though the plan itself recognizes that the magnitude of damage to structures and lifelines will rapidly overwhelm the capacity of state and local governments to assess the disaster and to identify and respond effectively to basic and emergency human needs. In spite of this, FEMA relies on state and local governments to identify services needed from the federal government once they have determined that they cannot adequately meet their needs.

Conducting damage and needs assessments as soon as a disaster occurs would enable local, state, and federal agencies to know what type and how much response is needed within 12 to 24 hours. The lack of both a comprehensive damage assessment and the ability to translate that assessment into an overall estimate of the services needed was one of the most glaring deficiencies in the response to

⁵"Response to Hurricane Hugo and the Loma Prieta Earthquake: Evaluation and Lessons Learned," FEMA, May 1991. Unpublished.

Hurricane Andrew. Absent any provisions for FEMA to either oversee or conduct a comprehensive damage assessment that can be used to estimate the services needed by disaster victims, it followed its normal procedures following the disaster declaration in South Florida. These procedures are based on the assumption that state and local governments already have conducted such surveys and will then use that information to request specific federal assistance.⁶

Although FEMA headquarters officials realized that massive amounts of relief would be needed from the federal government--and that Florida was not asking for the aid it needed--FEMA's Director told us that FEMA is limited by the Stafford Act to responding only to state requests for assistance. Therefore, he said, FEMA could not help the state unless it asked for assistance and specified how much it needed.

We believe that FEMA is authorized to take much more aggressive action than it took in Hurricane Andrew. For example, once the President has declared a disaster, FEMA has ample authority to conduct its own damage and needs assessment and then recommend to the state specific amounts of assistance that should be requested. Further, FEMA has the assets--in its National Preparedness Directorate--that could have been instrumental in such tasks as assessing damage, and establishing communication links between local, state, and federal officials at the disaster site. However, they were not fully used to respond to Hurricane Andrew and other recent disasters, in part, because the Federal Response Plan lacks procedures for using the Directorate's assets to respond to natural disasters.

As illustrated by the response to Hurricanes Andrew in Louisiana and Iniki in Hawaii, the federal response worked better in disasters of less magnitude and impact. Because Hurricane Andrew was less severe when it hit Louisiana and because Hurricane Iniki hit a less populated area, a smaller federal response was necessary. For example, FEMA's funding authorizations for all agencies' response and recovery missions totaled about \$820.5

⁶Currently, FEMA and officials from affected states conduct a preliminary damage assessment before the state requests a presidential disaster declaration. The information collected is used by the state as a basis for the Governor's request and by FEMA for the purpose of determining whether it will recommend to the President that the request be granted.

million. Of this total, \$726.4 million was for Florida, \$83 million for Hawaii, and \$11.1 million for Louisiana.⁷

Although damage assessment procedures were similar in all three locations, there was less confusion about needs in Louisiana and Hawaii. In Louisiana, FEMA worked with state officials to develop a list of specific goods and services needed, including food and water, prior to the presidential disaster declaration. In contrast, in Florida, state and local governments were unable to specify needs because of the overwhelming nature of Hurricane Andrew and the resultant confusion, causing delays in the provision of services. In addition, FEMA appeared to be more proactive in Louisiana and Hawaii than it had been in South Florida in working to accelerate response activities. For example, in Hawaii, FEMA, in collaboration with DOD, arranged for the military to provide mass care and other assistance within 7 hours of the presidential disaster declaration. In South Florida, the President decided to call in the military 4 days following the disaster declaration. Federal troops were not requested by Louisiana.

RESPONSE TO HURRICANE ANDREW
IN SOUTH FLORIDA DID NOT MEET NEEDS

In South Florida, state, local, and volunteer agencies fell far short of providing the amount of life-sustaining services needed in the immediate aftermath of Hurricane Andrew. For example, during the first 3 days after Hurricane Andrew, FEMA reports indicate that the combined efforts of federal, state, local, and volunteer agencies provided enough meals to feed about 30,000 to 50,000 disaster victims a day, although Andrew left about 160,000 to 250,000 people homeless and potentially in need of mass care.⁸

A number of disaster victims in South Florida told us that the relief effort was inadequate. They said that they survived by resorting to such actions as looting grocery stores to feed their families, drinking potentially contaminated water from leaking

⁷Actual costs incurred could vary from the amount authorized. To illustrate, DOD's incurred costs as of February 1993 totaled about \$553 million of which \$512 million was for Florida, \$34 million for Hawaii, and \$6.8 million for Louisiana.

⁸The figures provided should be viewed as rough indications only. GAO found no accurate statistics to precisely measure the mass care shortfall. Reports on meals served during the first 3 to 4 days after landfall were often incomplete. However, state and local officials agreed that there was a large gap between the amount of the mass care provided and the actual need.

faucets, and staving off looters by living in makeshift dwellings set up in front of their homes.

In addition, local officials, who in many cases were victims of the storm, knew that they were unable to meet their citizens' needs for life-sustaining services. However, they were having trouble communicating with one another and with the state, and were unable to request specific quantities of assistance.

FEMA regional officials told us that they knew by the second day after the disaster that more resources beyond those of the American Red Cross would be needed to meet the mass care needs of the disaster victims. These officials then offered to provide the state with whatever assistance it requested. However, Florida did not immediately request significant amounts of additional mass care because it had the impression that the state/local/volunteer network was doing an adequate job. For example, according to the state official who co-managed Florida's emergency operating center, the American Red Cross officials informed him that it had established feeding centers in Homestead and Florida City. The Red Cross later learned that some of the mobile feeding units it sent to the areas were not able to reach these cities because debris was still blocking the roadways. In fact, Homestead and Florida City--perhaps the two hardest-hit areas--did not get large scale feeding operations until the military supplemented voluntary efforts with field kitchens there 5 days after the disaster.

By the second day after the disaster, FEMA headquarters officials said that they had realized that a massive amount of relief would be needed from the federal government--and that Florida was not requesting it. To deal with this problem, concurrent with the designation of the Secretary of Transportation to oversee relief operations, the President also directed increased federal assistance, particularly from the military, to South Florida. At that point, significant amounts of relief supplies began flowing into the region.

RESPONSE IN LOUISIANA AND HAWAII WAS ADEQUATE

We found that the response to Hurricane Andrew in Louisiana and Hurricane Iniki in Hawaii was viewed as adequate by state and local officials, in contrast to Florida. State and local officials we spoke with in Louisiana and in Hawaii told us that overall the response was satisfactory. In fact in Louisiana, we were told that offers of federal assistance were more than adequate. State officials from Louisiana and Hawaii told us that the response efforts were successful for a variety of reasons, including a much smaller need for federal assistance and close coordination among all levels of government and volunteer organizations. Although

some problems, such as communications, were experienced, these did not delay the delivery of services.

Officials also told us that although no comprehensive damage assessment was conducted in either state (as was the case in Florida), Louisiana and Hawaii were generally able to identify their specific needs. In fact, FEMA assisted Louisiana officials in preparing a list of needed federal provisions and services, which was incorporated into the request for a presidential disaster declaration.

MAKING BETTER USE OF STATE AND LOCAL RESOURCES
AVAILABLE TO RESPOND TO CATASTROPHIC DISASTERS

IMPROVING USE OF CIVIL DEFENSE FUNDS

Approximately \$100 million is provided annually under civil defense authorities to develop state and local emergency response capabilities. Civil defense activities, which include the construction of emergency operating centers and training for key personnel, are carried out under the authority of the Civil Defense Act of 1950, as amended. The 1950 act originally was intended to develop a civil defense capability in the event of nuclear attack. However, a 1981 amendment to the act permits states to spend these funds on an all-hazards approach. That is, states may use civil defense funds to prepare for natural disasters to the extent that such use is consistent with, contributes to, and does not detract from attack-related civil defense preparedness.

Many state and local officials have told us that FEMA very closely controls what types of activities qualify for civil defense funding. According to these officials, nuclear defense concerns still predominate. The state and local officials stated that civil defense funding did not correspond to their areas' disaster response priorities and they would like additional flexibility to use civil defense funds to meet their priorities.

FEMA officials are aware of the benefits that increased flexibility would provide state and local entities and are considering merging the various programs into broader categories to enable a more diversified use of the funds. Some civil defense programs have been suspended for the current year while awaiting the results of FEMA's study of civil defense requirements, which is nearing completion. This study is intended to identify needs at the state and local level and establish appropriate funding levels for civil defense activities.

BETTER TRAINING FOR STATE AND LOCAL GOVERNMENTS

The amount of federal resources needed to respond to a catastrophic disaster is lessened if state and local government response capabilities are increased. We believe that FEMA could do more to ensure that state and local governments prepare for catastrophic disaster response. Our review uncovered shortcomings both in the way FEMA helps state and local governments train and conduct exercises in anticipation of catastrophic disasters and in the way it monitors state and local preparedness.

FEMA's own evaluation and our report on Hurricane Hugo recognized a number of training deficiencies.⁹ These included the need to provide state and local governments with training specifically geared towards developing such necessary catastrophic disaster response skills as assessing damage and estimating the amount of mass care needs. However, state and local officials have not received such training. For example, Dade County's Emergency Management Director told us that instead of training her in such skills as conducting damage and needs assessments, FEMA typically offered generic management training designed to enhance skills such as keeping program budgets. One of the biggest problems with the response to Hurricane Andrew in South Florida was the inability of state and local officials to determine how bad the disaster was and to specify how much assistance was needed.

FEMA officials told us that its Emergency Management Institute (EMI) is developing courses to enhance state and local officials' ability to respond to catastrophic disasters. However, EMI officials told us that they further delayed development of many disaster response courses until the completion of the Federal Response Plan, which was not finished until April 1992. Because such courses usually require about 2 years to develop, most were not available in time for Hurricane Andrew.

Most state officials believe that their state disaster exercises do not adequately prepare them to respond to catastrophic disasters. These officials cite such problems as too few exercises, low federal participation, and failure to act on weaknesses identified. To illustrate, Dade County conducted only one hurricane preparedness exercise in the past 4 years. There were 144 participants for the 1991 exercise--and none were from the federal government.

In 1991, FEMA staged two major earthquake exercises, involving one along the New Madrid fault (near Memphis, Tennessee) and one near Puget Sound, Washington, to test the draft Federal Response Plan. The New Madrid exercise identified such problems as (1) an individual Red Cross chapter's inability to handle a catastrophic disaster by itself, and (2) participants who had not had sufficient training on their roles in the plan. The Puget Sound exercise identified problems such as (1) inadequate state requests for assistance, (2) hesitation by federal personnel that could have resulted in numerous delays in procuring essential supporting services, and (3) communications system failures. These identified problems proved to be accurate, as shown by the events of Hurricane

⁹Disaster Assistance: Federal, State, and Local Responses to Natural Disasters Need Improvement (GAO/RCED-91-43, Mar. 6, 1991).

Andrew in South Florida. However, these shortcomings have not yet been corrected.

IMPROVING OVERSIGHT OF STATE AND LOCAL READINESS

Greater preparedness and accountability for state and local governments is needed to ensure that they, as well as participating federal agencies, make maximum efforts to effectively respond to disasters. However, FEMA is neither organized for, nor carries out, the type of oversight needed to ensure that deficiencies are identified and corrected.

FEMA headquarters sets policies and establishes training programs but does not monitor state performance. Regional offices implement headquarters' initiatives and interact directly with the states. However, regional offices report directly to the FEMA Director, not to the policy-setting program offices in headquarters. Headquarters officials told us that, as a result, they do not have comprehensive knowledge of state readiness.

Regional officials told us that headquarters has neither established performance standards nor developed a program for evaluating state and local preparedness for catastrophic disaster response. Therefore, the regions have no uniform national standards that can be used to judge state and local readiness. By creating performance standards and then evaluating how well state and local governments perform, FEMA can increase the accountability for all participating agencies.

Accountability can also be increased by allowing the states greater flexibility to channel FEMA funding to their own high-priority threats and by supporting this added flexibility with increased FEMA outreach efforts. Allowing states to take on a larger role in managing and addressing their greatest threats makes them more of a stakeholder in the outcome. Increased outreach efforts would provide FEMA with needed understanding of local strengths and weaknesses. This increased understanding would allow FEMA to work as a true partner with state and local governments--rather than to simply prescribe efforts from a federal perspective.

In an effort to increase coordination and sharing of resources within and among states, several states have formulated compacts or mutual aid agreements in order to provide resources and assistance in the event of a disaster. For example, the Southern Governors' Association has recently formed a steering committee to prepare a cooperative agreement that will set forth an executive plan and inventory. The plan will outline the operations, resources, and activities that may be activated when a disaster strikes a member state.

SUPPORT OF THE GOVERNOR AND STATE LEGISLATURE
AND STATE'S FISCAL SOUNDNESS AFFECT PREPAREDNESS

Factors unique to each state influence its level of preparedness. These factors include the commitment on the part of the governor and state legislature to emergency management, the reality of a perceived emergency threat, and the state's fiscal soundness.

Officials from state and local government organizations told us that support from the governor and state legislature as well as the reality of a perceived threat have the greatest influence on emergency management. These officials often cited the state of California as a case in point. Even though California has been so financially stressed that it ended fiscal year 1992 with a negative balance, it has a strong emergency management program that is based upon the reality of its earthquake threat. In fact, California is considered to be one of the best prepared states in the nation and has its own specialized training institute that offers courses to state, local, and other officials in responding to such problems as earthquakes, floods, and hazardous materials spills. Officials also told us that other smaller states, such as Tennessee and North Carolina, have strong emergency management programs because of the strong support by the governors and state legislatures, as well as the perceived threat of disasters.

In contrast, some financially stressed states may believe that there is no real threat of a disaster and adjust their funding decisions accordingly. For example, several years ago the state of Colorado scaled back its emergency management program because of (1) lack of a perceived threat and (2) budgetary constraints. Activities related to emergency management were placed in two separate state agencies.

Over the past 3 years, states have been under continuing fiscal pressures. In general, state and local governments are running a deficit in financing current operations, and expenditures have been increasing faster than revenues. For example, the state of Florida has experienced financial pressures that have had a negative impact on its emergency management program. In a 1992 report, the state noted that over the previous 3 fiscal years, general revenue funding for the program had decreased 31 percent, while federal and local funding increased. However, overall funding to support the program had not kept pace with the state's population growth. According to the report, the continuing decline in state general revenue funds has "eroded the emergency response capabilities of the state and its political subdivisions."



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