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HURRICANE KATRINA

Better Plans and Exercises Need to Guide the Military's Response to Catastrophic Natural Disasters

Statement of the Record by Sharon Pickup, Director
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Highlights of [GAO-06-808T](#), a statement to Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services, House of Representatives

Why GAO Did This Study

Hurricane Katrina was one of the largest natural disasters in U.S. history. Despite a large deployment of resources at all levels, many have regarded the federal response as inadequate. GAO has a body of ongoing work that covers the federal government's preparedness and response to hurricanes Katrina and Rita. This statement summarizes key points from GAO's report on the military's response to Katrina (GAO-06-643), which was issued earlier this month. It addresses (1) the support that the military provided in responding to Hurricane Katrina along with some of the challenges faced and key lessons learned; (2) actions needed to address these lessons, including GAO's recommendations to the Secretary of Defense; and (3) the extent to which the military is taking actions to identify and address the lessons learned.

In its report, GAO made several recommendations to improve the military response to catastrophic disasters. The recommendations called for updating the National Response Plan to reflect proactive functions the military could perform in a catastrophic incident; improving military plans and exercises; improving National Guard, Reserve, and active force integration; and resolving response problems associated with damage assessment, communication, search and rescue, and logistics issues. The Department of Defense (DOD) partially concurred with all of the recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-06-808T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Sharon Pickup at (202) 512-9619 or pickups@gao.gov.

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Better Plans and Exercises Needed to Guide the Military's Response to Catastrophic Natural Disasters

What GAO Found

The military mounted a massive response to Hurricane Katrina that saved many lives, but it also faced several challenges that provide lessons for the future. Based on its June 2005 civil support strategy, DOD's initial response relied heavily on the National Guard, but active forces were also alerted prior to landfall. Aviation, medical, engineering, and other key capabilities were initially deployed, but growing concerns about the disaster prompted DOD to deploy active ground units to supplement the Guard beginning about 5 days after landfall. Over 50,000 National Guard and 20,000 active personnel participated in the response. However, several factors affected the military's ability to gain situational awareness and organize and execute its response, including a lack of timely damage assessments, communications problems, uncoordinated search and rescue efforts, unexpected logistics responsibilities, and force integration issues. A key lesson learned is that additional actions are needed to ensure that the military's significant capabilities are clearly understood, well planned, and fully integrated.

As GAO outlined in its recommendations to the Secretary of Defense, many challenges that the military faced during Katrina point to the need for better plans and more robust exercises. Prior to Katrina, disaster plans and exercises did not incorporate lessons learned from past catastrophes to fully identify the military capabilities needed to respond to a catastrophe. For example, the National Response Plan made little distinction between the military response to smaller regional disasters and catastrophic natural disasters. In addition, DOD's emergency response plan for providing military assistance to civil authorities during disasters lacked adequate detail. It did not account for the full range of assistance that DOD might provide, address the respective contributions of the National Guard and federal responders, or establish response time frames. National Guard state plans were also inadequate and did not account for the level of outside assistance that would be needed during a catastrophe, and they were not synchronized with federal plans. Moreover, none of the exercises that were conducted prior to Katrina had called for a major deployment of DOD capabilities to respond to a catastrophic hurricane. Without actions to help address planning and exercise inadequacies, a lack of understanding will continue to exist within the military and among federal, state, and local responders as to the types of assistance and capabilities that DOD might provide in response to a catastrophe; the timing of this assistance; and the respective contributions of the active, Reserve, and National Guard forces.

DOD is examining the lessons learned from a variety of sources and is beginning to take actions to address them and prepare for the next catastrophe. It is too early to evaluate DOD's actions, but many appear to hold promise. However, some issues identified after Katrina, such as damage assessments, are long-standing, complex problems that cut across agency boundaries. Thus, substantial improvement will require sustained attention from the highest management levels in DOD and across the government.

Mr. Chairman and the Members of the Subcommittee:

Thank you for the opportunity to provide this statement for your hearing on how the Department of Defense (DOD) is preparing for the upcoming hurricane season and applying lessons learned from Hurricane Katrina. Hurricane Katrina was one of the largest natural disasters in our nation's history and, because of its size and strength, will have long-standing effects for years to come. Prior catastrophic disasters and the actual experience after Katrina have shown the need for DOD to contribute substantial support to state and local authorities given its extensive capabilities and expertise in key areas such as damage assessment and communications. As you know, under the National Response Plan, DOD is generally assigned a supporting role in disaster response but, even in this role, has specific planning responsibilities in anticipation of being called upon in a disaster. Within DOD, the 2005 Strategy for Homeland Defense and Civil Support envisioned a reliance on National Guard and Reserve forces for homeland missions, including disaster response, but recognized that active duty forces may also play a role depending on the nature of the event. Individual states have their own disaster response plans which typically include substantial supporting roles for their National Guards.

In anticipation of and in the days following Hurricane Katrina's landfall, the military¹ took many proactive steps and mobilized significant resources—both active duty and National Guard forces—that saved many lives and greatly enhanced response efforts. At the same time, as local, state, and federal governments responded in the days following Katrina, confusion surfaced as to what responsibilities the military has and what capabilities it would provide in planning and responding to a catastrophic event. While this experience underscored the importance of the military, especially in the wake of a catastrophe, it also identified some areas requiring more attention to enhance future military responses. As the nation is quickly approaching the 2006 hurricane season, sorting out the relevant lessons learned during Hurricane Katrina for the military, putting them in the context of the military's role in the complex disaster response mission, and then following through with needed changes is vital.

¹Throughout this statement, we use the term military to refer to the combined efforts of the National Guard and the federal military force. We use the term DOD to distinguish between the federal military response commanded by the U.S. Northern Command and the National Guard response. During Katrina, DOD's federal military response consisted of active duty military personnel and reservists who volunteered to be part of the federal response.

This statement is based on our report issued earlier this month, entitled *Hurricane Katrina: Better Plans and Exercises Needed to Guide the Military's Response to Catastrophic Natural Disasters* (GAO-06-643), and summarizes the key points from that report, including (1) the support that the military provided in responding to Hurricane Katrina along with some of the challenges faced and key lessons learned; (2) actions needed to address these lessons, including our recommendations to the Secretary of Defense; and (3) the extent to which the military is taking actions to identify and address the lessons learned. The work supporting our report reflects our travel to the affected areas, interviews with officials who led the response efforts at both the federal and state levels, and extensive analysis of data and documents from numerous military organizations that provided support to the Hurricane Katrina response operations. We conducted our review from September 2005 through April 2006 in accordance with generally accepted government auditing standards. In addition to our recently completed review of the military response, we have published several products² on Hurricane Katrina and prior disasters, and currently have a large body of ongoing work to address preparation, response, recovery, and rebuilding efforts related to hurricanes Katrina and Rita.

Summary

The military mounted a massive response to Hurricane Katrina that saved many lives and greatly assisted recovery efforts but faced several challenges from which many lessons are emerging. The military took proactive steps and responded with over 50,000 National Guard and 20,000 active federal personnel. Consistent with its June 2005 civil support strategy—but unlike past catastrophes—DOD relied heavily on the National Guard during the response. Active duty forces were also alerted prior to landfall, and key capabilities, such as aviation, medical, and engineering forces, were initially deployed. Growing concerns about the magnitude of the disaster prompted DOD to deploy large, active ground units to supplement the Guard beginning about 5 days after landfall. However, like other responders, the military faced challenges in its

²For example, see GAO, *Disaster Assistance: DOD's Support for Hurricanes Andrew and Iniki and Typhoon Omar*, GAO/NSIAD-93-180 (Washington, D.C.: June 18, 1993); *Statement by Comptroller General David M. Walker on GAO's Preliminary Observations Regarding Preparedness and Response to Hurricanes Katrina and Rita*, GAO-06-365R (Washington, D.C.: Feb. 1, 2006); and *Hurricane Katrina: GAO's Preliminary Observations Regarding Preparedness, Response, and Recovery*, GAO-06-442T (Washington, D.C.: Mar. 8, 2006).

response that affected its ability to gain situational awareness and organize and execute its response. These challenges included obtaining timely damage assessments; restoring and maintaining interoperable communications; coordinating search and rescue efforts; and assuming unexpected responsibilities for logistics support, which led to limited visibility of items that had been ordered by the Federal Emergency Management Agency (FEMA) and were in transit to the affected areas. Moreover, integrating the large numbers of active and Guard forces from many parts of the country was at times problematic. In addition, a key mobilization statute, which limits a unit or member of a reserve component from being involuntarily ordered to federal active duty for disaster response, also affected the integration.³ Reservists who responded to Katrina were volunteers, and they constituted a relatively small portion of the response when compared to the National Guard and active component portions of the response. While the military clearly provided vital support, no one had the total picture of the situation on the ground, the capabilities that were on the way, the missions that had been resourced, and the missions that still needed to be completed. Unfortunately, many of these problems are long-standing, and we reported similar issues after Hurricane Andrew hit south Florida in 1992. Therefore, the key lesson learned is that while the military has significant and sometimes unique capabilities that can be brought to bear, additional actions are needed to ensure that its contributions are clearly understood and well planned and integrated.

Many of the challenges faced in the response point to the need for better plans and more robust exercises, as we outlined in our recommendations to the Secretary of Defense. Such plans are needed to better define the military's role in a catastrophic natural disaster, identify capabilities that could be available and provided by the military, and integrate the response of the active and reserve components. Robust exercises are then needed to test those plans and allow planners to refine them. Prior to Hurricane Katrina, disaster plans and exercises were insufficient and did not

³Section 12304 of Title 10 of the United States Code prohibits the involuntary activation of National Guard and Reserve members for domestic disaster operations. While this restriction applies to both National Guard and Reserve forces, National Guard forces were mobilized under both state active duty and Title 32 for Hurricane Katrina. No similar provisions exist to specifically mobilize Reserve forces for disaster response, although it is conceivable that if the President declares a national emergency and invokes 10 U.S.C. § 12302 reserve component forces could become available for involuntary activation. Under 10 U.S.C. § 12301 (d), the President can activate National Guard and Reserve volunteers for any purpose.

incorporate lessons learned from past catastrophes to fully delineate the military capabilities needed to respond to a catastrophe. For example, the government's National Response Plan (NRP) made little distinction between the military response to a smaller regional disaster and its response to a catastrophic natural disaster. In addition, DOD's emergency response plan for providing military assistance to civil authorities during disasters did not account for the full range of assistance that might be provided by DOD, address the respective contributions of the National Guard and the federal responders, or establish response time frames. National Guard state plans did not account for the level of outside assistance that would be needed during a catastrophe and were not synchronized with federal plans. Moreover, plans had not been tested with a robust exercise program in that none of the exercises that were conducted prior to Katrina called for a major deployment of DOD capabilities in response to a catastrophic hurricane. As a result, a lack of understanding exists within the military and among federal, state, and local responders as to the types of assistance and capabilities that DOD might provide in the event of a catastrophe, the timing of this assistance, and the respective contributions of the active duty and National Guard forces. We recommended that DOD take a number of actions to help address planning and exercise inadequacies, including fully addressing the proactive functions the military will be expected to perform under the NRP in the event of a catastrophe and improving military plans and exercises so that these plans specifically address the potential contributions of the military in key areas—such as damage assessment, communications, search and rescue, and logistics support—as well as the integration of the military's active duty and Reserve and National Guard forces.

Since Hurricane Katrina, DOD has analyzed the military response and is taking several actions to address the lessons learned from Hurricane Katrina and prepare for the next catastrophic event. In addition to conducting its own lessons-learned reviews, DOD is also examining the lessons and recommendations from other sources, including GAO. DOD generally concurred with the recommendations we made in our recent report and is taking actions to address catastrophic disaster response problems that we and others have identified. While it is too early to evaluate DOD's actions, many appear to hold promise, such as the efforts to refine the NRP complete its operational plan, and embed defense officials into FEMA regional offices. However, such DOD actions are only first steps. Some issues identified after Katrina are long-standing problems that we identified after Hurricane Andrew in 1992. Moreover, they will be difficult to address because they are complex and cut across agency

boundaries. Thus, substantial improvement will require sustained attention from the highest management levels in DOD and from leaders across the government.

Background

About 9 months prior to Katrina's landfall, the NRP was issued to frame the federal response to domestic emergencies ranging from smaller, regional disasters to incidents of national significance. The plan generally calls for a reactive federal response following specific state requests for assistance. However, the NRP also contains a catastrophic incident annex that calls for a proactive federal response when catastrophes overwhelm local and state responders. The NRP generally assigns DOD a supporting role in disaster response, but even in this role, DOD has specific planning responsibilities. For example, the NRP requires federal agencies to incorporate the accelerated response requirements of the NRP's catastrophic incident annex into their own emergency response plans.

Within DOD, the Strategy for Homeland Defense and Civil Support, which was issued in June 2005, envisions a greater reliance on National Guard and Reserve forces for homeland missions. The military response to domestic disasters typically varies depending on the severity of an event. During smaller disasters, an affected state's National Guard may provide a sufficient response, but larger disasters and catastrophes that overwhelm the state may require assistance from out-of-state National Guard or federal troops. For Katrina, the response heavily relied on the National Guard, which is consistent with DOD's Strategy for Homeland Defense and Civil Support. This represents a departure from past catastrophes when active duty forces played a larger role in response efforts.

During disaster response missions, National Guard troops typically operate under the control of the state governors. However, the National Guard Bureau has responsibility for formulating, developing, and coordinating policies, programs, and plans affecting Army and Air National Guard personnel, and it serves as the channel of communication between the U.S. Army, the U.S. Air Force, and the National Guard in U.S. states and territories. Although the Chief of the National Guard Bureau does not have operational control of National Guard forces in the states and territories, he has overall responsibility for National Guard Military Support to Civil Authorities programs. The U.S. Northern Command also has a mission to provide support to civil authorities. Because of this mission, U.S. Northern Command was responsible for commanding the federal military response to Hurricane Katrina.

The Military Response Was Massive but Faced Several Challenges, Which Provide Lessons for the Future

During its massive response to Hurricane Katrina the military faced many challenges, which provide lessons for improving the future military response to catastrophic natural disasters. Issues arose with damage assessments, communications, search and rescue efforts, logistics, and the integration of military forces.

The Military Response Was Massive

In the wake of Hurricane Katrina, the military mounted a massive response that saved many lives and greatly assisted recovery efforts. Military officials began tracking Hurricane Katrina when it was an unnamed tropical depression and proactively took steps that led to a Katrina response of more than 50,000 National Guard and more than 20,000 federal military personnel, more than twice the size of the military response to 1992's catastrophic Hurricane Andrew. By the time Katrina made landfall in Louisiana and Mississippi on August 29, 2005, the military was positioned to respond with both National Guard and federal forces.

Prior to Katrina's landfall, active commands had published warning and planning orders and DOD had already deployed Defense Coordinating Officers to all the potentially affected states. DOD also deployed a joint task force; medical personnel; helicopters; ships from Texas, Virginia, and Maryland; and construction battalion engineers. Many of these capabilities were providing assistance or deploying to the area within hours of Katrina's landfall. DOD also supported response and recovery operations with communications equipment and many other critically needed capabilities. Growing concerns about the magnitude of the disaster prompted DOD to deploy large active duty ground units beginning on September 3, 2005, 5 days after Katrina's landfall.

Prior to landfall, anticipating the disruption and damage that Hurricane Katrina could cause, the governors of Louisiana and Mississippi activated their National Guard units. In addition, National Guard officials in Louisiana and Mississippi began to contact National Guard officials in other states to request assistance. While National Guard forces from Louisiana and Mississippi provided the bulk of the military support in the first days after landfall, most of the Guard response to Hurricane Katrina came later from outside the affected states. The National Guard Bureau acted as a conduit to communicate requirements for assistance in Louisiana and Mississippi to the adjutants general in the rest of the

country. The adjutants general of other states, with the authorization of their state governors, then sent their National Guard troops to Louisiana and Mississippi under emergency assistance agreements between the states. Requirements for out-of-state National Guard or federal assistance were increased because thousands of National Guard personnel from Mississippi and Louisiana were already mobilized for other missions and thus unavailable when Hurricane Katrina struck their states. The National Guard troops that had been mobilized from within the affected states were able to quickly deploy to where they were needed because they had trained and planned for disaster mobilizations within their states. The deployment of out-of-state forces, though quick when compared to past catastrophes, took longer because mobilization plans were developed and units were identified for deployment in the midst of the crisis. At the peak of the military's response, however, nearly 40,000 National Guard members from other states were supporting operations in Louisiana and Mississippi—an unprecedented domestic mobilization.

Challenges Provide Lessons for the Future

While the military response to Katrina was massive, it faced many challenges, which provide lessons for the future, including the need for the following:

- **Timely damage assessments.** As with Hurricane Andrew, an underlying problem in the response was the failure to quickly assess damage and gain situational awareness. The NRP notes that local and state officials are responsible for damage assessments during a disaster, but it also notes that state and local officials could be overwhelmed in a catastrophe. Despite this incongruous situation, the NRP did not specify the proactive means necessary for the federal government to gain situational awareness when state and local officials are overwhelmed. Moreover, DOD's planning did not call for the use of the military's extensive reconnaissance assets to meet the NRP catastrophic incident annex's requirement for a proactive response to catastrophic incidents. Because state and local officials were overwhelmed and the military's extensive reconnaissance capabilities were not effectively leveraged as part of a proactive federal effort to conduct timely, comprehensive damage assessments, the military began organizing and deploying its response without fully understanding the extent of the damage or the required assistance. According to military officials, available reconnaissance assets could have provided additional situational awareness during Hurricane Katrina, and in September 2005, considerable surveillance assets were made available to assess damage from Hurricane Rita, primarily because of the lessons learned from Hurricane Katrina.

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- **Improved communications.** Hurricane Katrina caused significant damage to the communication infrastructure in Louisiana and Mississippi, which further contributed to a lack of situational awareness for military and civilian officials. Even when local officials were able to conduct damage assessments, the lack of communication assets caused delays in transmitting the assessments. Under the NRP, the Department of Homeland Security has responsibility for coordinating the communications portion of disaster response operations. However, neither the NRP, the Department of Homeland Security, nor DOD fully identified the extensive military communication capabilities that could be leveraged as part of a proactive federal response to a catastrophe. DOD's plan addressed internal military communications requirements but not the communication requirements of communities affected by the disaster. Because state and local officials were overwhelmed and the Department of Homeland Security and DOD waited for requests for their assistance rather than deploying a proactive response, some of the military's available communication assets were never requested or deployed. In addition, some deployed National Guard assets were underutilized because the sending states placed restrictions on their use. Communications problems, like damage assessment problems, were also highlighted following Hurricane Andrew.
 - **Coordinated search and rescue efforts.** While tens of thousands of people were rescued after Katrina, the lack of clarity in search and rescue plans led to operations that according to aviation officials, were not as efficient as they could have been. The NRP addressed only part of the search and rescue mission, and the National Search and Rescue Plan had not been updated to reflect the NRP. As a result, the search and rescue operations of the National Guard and federal military responders were not fully coordinated, and military operations were not integrated with the search and rescue operations of the Coast Guard and other rescuers. At least two different locations were assigning search and rescue tasks to military helicopter pilots operating over New Orleans, and no one had the total picture of the missions that had been resourced and the missions that still needed to be performed.
 - **Clear logistics responsibilities.** DOD had difficulty gaining visibility over supplies and commodities when FEMA asked DOD to assume a significant portion of its logistics responsibilities. Under the NRP, FEMA is responsible for coordinating logistics during disaster response efforts, but during Hurricane Katrina, FEMA quickly became overwhelmed. Four days after Katrina's landfall, FEMA asked DOD to take responsibility for procurement, transportation, and distribution of ice, water, food, fuel, and

medical supplies. However, because FEMA lacked the capability to maintain visibility—from order through final delivery—of the supplies and commodities it had ordered, DOD did not know the precise locations of the FEMA-ordered supplies and commodities when it assumed FEMA's logistics responsibilities. As a result of its lack of visibility over the meals that were in transit, DOD had to airlift 1.7 million meals to Mississippi to respond to a request from the Adjutant General of Mississippi, who was concerned that food supplies were nearly exhausted.

- **Better integration of military forces.** The military did not adequately plan for the integration of large numbers of deployed troops from different commands during disaster response operations. For example, a Louisiana plan to integrate military responders from outside the state called for the reception of not more than 300 troops per day. However, in the days following Hurricane Katrina, more than 20,000 National Guard members from other states arrived in Louisiana to join the response effort. In addition, the National Guard and federal responses were coordinated across several chains of command but not integrated, which led to some inefficiencies and duplication of effort. Because military plans and exercises had not provided a means for integrating the response, no one had the total picture of the forces on the ground, the forces that were on the way, the missions that had been resourced, and the missions that still needed to be completed. Also, a key mobilization statute limits DOD's Reserve and National Guard units and members from being involuntarily ordered to federal active duty for disaster response. As a result, all the reservists who responded to Hurricane Katrina were volunteers, and they made up a relatively small portion of the response compared to the National Guard and active component members. Moreover, the process of lining up volunteers can be time-consuming and is more appropriate for mobilizing individuals than it is for mobilizing entire units or capabilities that may be needed during a catastrophe. After Hurricane Andrew, we identified this issue in two 1993 reports.⁴

⁴GAO/NSIAD-93-180 and GAO, *Disaster Management: Improving the Nation's Response to Catastrophic Disasters*, GAO/RCED-93-186 (Washington, D.C.: July 23, 1993).

Better Plans and Exercises Needed to Define and Guide Future Military Responses during Catastrophic Natural Disasters

Operational challenges are inevitable in any large-scale military deployment, but the challenges that the military faced during its response to Hurricane Katrina demonstrate the need for better planning and exercising of catastrophic incidents in order to clearly identify military capabilities that will be needed and the responsibilities that the military will be expected to assume during these incidents. Prior to Katrina, plans and exercises were generally inadequate for a catastrophic natural disaster.

- **The National Response Plan.** The NRP, which guides planning of supporting federal agencies, lacks specificity as to how DOD should be used and what resources it should provide in the event of a domestic natural disaster. The NRP makes little distinction between the military response to smaller, regional disasters and the military response to large-scale, catastrophic natural disasters. Even though past catastrophes, such as Hurricane Andrew in 1992 and the 1989 earthquake in the San Francisco area, showed that the military tends to play a much larger role in catastrophes, the NRP lists very few specific DOD resources that should be called upon in the event of a catastrophic natural disaster. Given the substantial role the military is actually expected to play in a catastrophe—no other federal agency brings as many resources to bear—this lack of detailed planning represents a critical oversight.
- **The DOD plan.** When Hurricane Katrina made landfall, DOD’s plan for providing defense assistance to civil authorities was nearly 9 years old and was undergoing revision. The plan had not been aligned with the NRP and had been written before the 2005 Strategy for Homeland Defense and Civil Support, which called for a focused reliance on the reserve components for civil support missions. The plan did not account for the full range of tasks and missions the military could need to provide in the event of a catastrophe and had little provision for integrating active and reserve component forces. It did not address key questions of integration, command and control, and division of tasks between National Guard resources under state control and federal resources under U.S. Northern Command’s control. Moreover, the plan did not establish time frames for the response.
- **National Guard plans.** At the state level, the plans of the Louisiana and Mississippi National Guards were inadequate for Katrina and not well coordinated with those of other National Guard forces across the country. The Mississippi and Louisiana National Guard plans appeared to be adequate for smaller disasters, such as prior hurricanes, but they were insufficient for a catastrophe and did not adequately account for the outside assistance that could be needed during a catastrophe. For

example, Joint Forces Headquarters Louisiana modified its plan and reassigned disaster responsibilities when thousands of Louisiana National Guard personnel were mobilized for federal missions prior to Hurricane Katrina. However, the Louisiana plan did not address the need to bring in thousands of military troops from outside the state during a catastrophe. Similarly, Mississippi National Guard officials told us that even their 1969 experience with Hurricane Camille, a category 5 storm that hit the same general area, had not adequately prepared them for a catastrophic natural disaster of Katrina's magnitude. For example, the Mississippi National Guard disaster plan envisioned the establishment of commodity distribution centers, but it did not anticipate the number of centers that could be required in a catastrophic event or following a nearly complete loss of infrastructure. In addition, the National Guard Bureau had not coordinated in advance with the governors and adjutants general in the states and territories to develop plans to provide assistance for catastrophic disasters across the country. Specifically, the bureau had not identified the types of units that were likely to be needed during a catastrophe or worked with the state governors and adjutants general to develop and maintain a list of National Guard units from each state that would likely be available to meet these requirements during catastrophic natural disasters.

- **Exercises.** An underlying reason that insufficient plans existed at all levels is that the disaster plans had not been tested and refined with a robust exercise program. Such exercises are designed to expose weaknesses in plans and allow planners to refine them. As a result, when Hurricane Katrina struck, a lack of understanding existed within the military and among federal, state, and local responders as to the types of assistance and capabilities that the military might provide, the timing of this assistance, and the respective contributions of the National Guard and federal military forces. The Homeland Security Council has issued 15 national planning scenarios—including a major hurricane scenario—that provide the basis for disaster exercises throughout the nation. While DOD sponsors or participates in no less than two major interagency field exercises per year, few exercises led by the Department of Homeland Security or DOD focused on catastrophic natural disasters, and none of the exercises called for a major deployment of DOD capabilities in response to a catastrophic hurricane. In addition, although DOD has periodically held modest military support to civil authorities exercises, the exercises used underlying assumptions that were unrealistic in preparing for a catastrophe. For example, DOD assumed that first responders and communications would be available and that the transportation infrastructure would be navigable in a major hurricane scenario. Finally, the First U.S. Army conducted planning and exercises in response to six

hurricanes in 2005. These exercises led to actions, such as the early deployment of Defense Coordinating Officers, which enhanced disaster response efforts. However, DOD's exercise program was not adequate for a catastrophe of Hurricane Katrina's magnitude.

Based on our evaluation of the aforementioned plans and exercises, we made several recommendations to the Secretary of Defense. First, we called for DOD to work with the Department of Homeland Security to update the NRP to fully address the proactive functions the military will be expected to perform during a catastrophic incident. Second, we recommended that DOD develop detailed plans and exercises to fully account for the unique capabilities and support that the military is likely to provide during a catastrophic incident, specifically addressing damage assessments, communication, search and rescue, and logistics as well as the integration of forces. Third, we called for the National Guard Bureau to identify the National Guard capabilities that are likely to respond to catastrophes in a state status and to share this information with active commands within DOD. Finally, we recommended that DOD identify the scalable federal military capabilities it will provide in response to the full range of domestic disasters and catastrophes. We also raised a matter for congressional consideration, suggesting that Congress consider lifting or modifying the mobilization restriction—10 U.S.C. § 12304 (c)(1)—that limits reserve component participation in catastrophic natural disasters.

DOD Is Taking Steps to Address Lessons Learned

DOD has collected lessons learned following Hurricane Katrina from a variety of sources. Within the department, DOD has a formal set of procedures to identify, capture, and share information collected as a result of operations in order to enhance performance in future operations. Even in the midst of the Hurricane Katrina response operation, officials from various military organizations were collecting information on lessons learned and this continued well after most operations had ceased. For example, communications issues that had surfaced were studied by both active and National Guard commands that had responded to Hurricane Katrina. DOD also formed a task force to study the response and is compiling and analyzing various military and other lessons-learned reports to help design an improved response to future natural catastrophic events. According to DOD officials, they have also reviewed White House and congressional reports identifying lessons to be applied or challenges to be addressed in future response operations.

As of today, DOD has also begun taking actions to enhance the military's preparedness for future catastrophic events. Specifically, in responding to

our recently issued report, DOD generally concurred with our recommendations for action and told us that it had developed plans to address them. DOD noted, for example, that the NRP would be revised to plan for a significant DOD role in a catastrophe and a more-detailed DOD operational plan that has been in draft would be finalized. Our recommendations and DOD's response to them are shown in appendix I.

In addition, DOD said that it was taking several additional actions, including

- colocating specially trained defense department personnel at FEMA regional offices;
- folding support from federal reconnaissance agencies into the military's civil support processes;
- developing "pre-scripted" requests that would ease the process for civilian agencies to request military support;
- conducting extensive exercises, including the recently completed Ardent Sentry and other planned events, with FEMA; and
- delegating authority for deploying defense coordinating elements and placing on "prepare to deploy" orders communications, helicopter, aerial reconnaissance, and patient-evacuation capabilities.

The department plans to complete many of these steps by June 1, 2006—the start of the next hurricane season—but acknowledged that some needed actions will take longer to complete. Since details about many of the department's actions were still emerging as we completed our review, we were unable to fully assess the effectiveness of DOD's plans, but they do appear to hold promise.

Concluding Observations

In conclusion, while DOD's efforts to date to address the Hurricane Katrina lessons learned are steps in the right direction—and the department deserves credit for taking them—these are clearly only the first steps that will be needed. The issues cut across agency boundaries, and thus they cannot be addressed by the military alone. The NRP framework envisions a proactive national response involving the collective efforts of responder organizations at all levels of government. Looking forward, part of DOD's challenge is the sheer number of organizations at all levels of government that are involved, both military and civilian. In addition, many of the problems encountered during the Katrina response are long-standing and were also reported after Hurricane Andrew in 1992. Because of the complexity and long-standing nature of these problems, DOD's planned and ongoing actions must receive sustained top-

management attention, not only at DOD but across the government, in order to effect needed improvements in the military's support to civil authorities. While the issues are complex, they are also urgent, and experience has illustrated that the military has critical and substantial capabilities that will be needed in the wake of catastrophic events.

Contact and Staff Acknowledgements

For further information regarding this statement, please contact me at (202) 512-9619 or pickups@gao.gov. Individuals making key contributions to this statement include John Pendleton, Assistant Director, Michael Ferren, Kenya Jones, and Leo Sullivan.

Appendix I: GAO's Recommendations to the Secretary of Defense to Improve Military Support and DOD's Response

GAO recommendation to the Secretary of Defense	Department of Defense (DOD) Response (dated May 5, 2006)
Provide the Secretary of the Department of Homeland Security with proposed revisions to the National Response Plan (NRP) that will fully address the proactive functions the military will be expected to perform during a catastrophic incident, for inclusion in the next NRP update.	DOD said that it is working with the Department of Homeland Security to revise the NRP. While DOD stated that the long-term focus of the U.S. government should be to develop more robust domestic disaster capabilities within the Department of Homeland Security, it acknowledged that DOD will need to assume a more robust response role in the interim period and when other responders lack the resources and expertise to handle a particular disaster.
Establish milestones and expedite the development of detailed plans and exercises to fully account for the unique capabilities and support that the military is likely to provide to civil authorities in response to the full range of domestic disasters, including catastrophes. The plans and exercises should specifically address the use of reconnaissance capabilities to assess damage, use of communications capabilities to facilitate support to civil authorities, integration of active component and National Guard and Reserve forces, use of search and rescue capabilities and the military's role in search and rescue, and role the military might be expected to play in logistics.	DOD listed a number of steps it is taking to improve its disaster response planning and exercises and said that consistent with its Strategy for Homeland Defense and Civil Support, the active component should complement, but not duplicate, the National Guard's likely role as an early responder. DOD also said that planning and exercises should include local, state, and federal representatives and should stress the responders with the highest degree of realism possible—to the breaking point if possible.
Direct the Chief of the National Guard Bureau to work with the state governors and adjutants general to develop and maintain a list of the types of capabilities the National Guard will likely provide in response to domestic natural disasters under state-to-state mutual assistance agreements along with the associated units that could provide these capabilities, and make this information available to the U.S. Northern Command, U.S. Joint Forces Command, and other organizations with federal military support to civil authority planning responsibilities.	DOD listed steps the U.S. Northern Command is taking to better understand the capabilities of National Guard units, and it stated that the National Guard is creating a database to facilitate planning its employment in support of the homeland.
Establish milestones and identify the types of scalable federal military capabilities and the units that could provide those capabilities in response to the full range of domestic disasters and catastrophes covered by DOD's defense support to civil authorities plans.	DOD noted that it has developed scalable capability packages in conjunction with pre-scripted requests for assistance and U.S. Northern Command's Contingency Plan 2501, which is scheduled to be signed in the spring of 2006.

Source: GAO.

Note: The recommendations are from GAO, Hurricane Katrina: Better Plans and Exercises Needed to Guide the Military's Response to Catastrophic Natural Disasters, [GAO-06-643](#) (Washington, D.C.: May 15, 2006).

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