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Oversight and Investigations, Committee
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HURRICANE KATRINA

Providing Oversight of the
Nation's Preparedness,
Response, and Recovery
Activities

Statement of Norman J. Rabkin, Managing Director,
Homeland Security and Justice Issues



Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss oversight of the nation's response to Hurricane Katrina. As Comptroller General Walker has stated, while the Inspectors General of the various departments plan to conduct detailed work on fraud, waste, and abuse in individual programs in federal agencies, GAO plans to provide support to Congress through analysis and evaluation of the various issues related to coordination among different federal agencies, and between these federal agencies and the state, local, and private sectors. The Comptroller General has also stated that GAO will be involved in reviewing the overall funding for and use of Katrina-related funding by various federal agencies. In addition, GAO has conducted several related reviews in the past—including reviews of federal actions following Hurricane Andrew in 1992—that will be helpful in evaluating the nation's response to Hurricane Katrina.

But before I begin my detailed comments, I want to say that, as you know, all of us at the U.S. Government Accountability Office, as all Americans, were saddened by the destruction that Hurricane Katrina caused throughout the Gulf Coast in Louisiana, Mississippi, and Alabama on August 29, 2005, and the ensuing days. One of the many roles of government is to provide for its citizens at a time when they are most in need. Because of Hurricane Katrina, it is clear that strengthening the nation's emergency response efforts is at the top of the national agenda. While this testimony is a dispassionate and analytical discussion of some of the challenges faced by the nation, we recognize the terrible costs of Hurricane Katrina, as well as Hurricane Rita, in human terms and our hearts go out to the victims and their families.

Hurricane Katrina will have an enormous impact on people and the economy of the region as well as the United States. The hurricane affected over a half million people located within approximately 90,000 square miles spanning Louisiana, Mississippi, and Alabama, and has resulted in one of the largest natural disaster relief and recovery operations in United States history. Many of the sectors affected by the hurricane are within the jurisdiction of the Committee on Energy and Commerce. In terms of public health, standing water and high temperatures have created a breeding ground for disease, and public health advisories have warned about the spread of disease in the affected areas. The medical needs of evacuees will be an additional challenge; many evacuees are without medical records and at risk of losing their medical coverage. Hurricane Katrina also resulted in environmental challenges, such as water and sediment contamination from toxic materials released into the

floodwaters. In addition, our nation's energy infrastructure was hard hit. The Department of Energy reported that 21 refineries in affected states were either shut down or operating at reduced capacity in the aftermath of the hurricane. Damaged transmission lines left as many as 2.3 million customers without electricity. The hurricane also disrupted commerce. According to the Department of Commerce, the ports damaged by Hurricane Katrina accounted for 4.5 percent of total exports of goods from the United States last year, and 5.4 percent of total U.S. imports. Finally, in terms of telecommunications, the Federal Communications Commission reported that Hurricane Katrina knocked out radio and television stations, more than 3 million customer phone lines, and more than a thousand cell phone sites.

In my statement today I will highlight some of GAO's previous work on challenges faced by government preparedness, response, and recovery programs, many of which are directly related to this committee's jurisdiction. For future work, GAO will continue to provide this committee and Congress with independent analysis and evaluations, and coordinate our efforts with the accountability community to ensure appropriate oversight of federal programs and spending. As provided for in our Congressional protocols, we plan to conduct Katrina-related work under the Comptroller General's statutory authority since it is an issue of interest to the entire Congress and numerous committees in both houses.

My statement is based upon our extensive work spanning a wide variety of topics over a number of years. Much of this work was done relatively recently in the aftermath of the terrorist attacks of September 11, 2001, and the subsequent creation of the Department of Homeland Security in March 2003. In all, we have published 120 reports on disaster preparedness and response, and other issues raised by Katrina, that are useful in moving forward in addressing problems encountered with the nation's response to Hurricane Katrina. At the end of this statement is a comprehensive list of our related products.

Summary

Our past work has noted needed improvements in government programs related to preparing for, responding to, and recovering from natural disasters such as Hurricane Katrina. Many of these challenges relate to programs under the jurisdiction of the Energy and Commerce Committee. For example, health care providers had not always been adequately prepared for catastrophic events. The health care community has been addressing some of these challenges, such as those involving coordination efforts and communications systems, more readily than others, such as

infrastructure and workforce issues, which are more resource-intensive. Our work on energy issues has described some of the consequences of hurricanes on petroleum markets—such as rapid price increases. Our environmental work has indicated that the loss of wetlands has increased the severity of damage from hurricanes, and that cleanup of contaminated sites takes a tremendous amount of coordination and funding. Finally, our work on telecommunications issues has found that first responders are challenged by the lack of interoperable emergency communications. In these areas, among others, we have made a number of recommendations, many of which are still pending completion.

Past GAO Work Has Highlighted Needed Improvements in Many Programs Related to Preparedness, Response, and Recovery

There are a host of challenges to government programs related to Hurricane Katrina and other natural disasters in terms of preparedness, response, and recovery. Our work on preparedness—programs to prevent disasters or prepare to respond in advance—has identified needed improvements in a number of areas, including balancing efforts to prepare for terrorism with efforts related to natural disasters and all hazards; planning preparedness efforts and setting goals and measures; providing training, exercises, evaluations, and lessons learned to first responders; providing flood control and protection; improving public health preparedness; and providing federal grants to state and local governments. Similarly, our work on response to disasters has identified a number of problems. These relate to federal, state and local roles in coordinating the response; the role of the military, to include the National Guard; and the medical and public health response capabilities. Furthermore, our work on recovery—programs to help communities and victims get back to normal—has also identified challenges related to federal assistance to recovery areas, private nongovernment assistance efforts, and lessons from overseas recovery programs. In many of these areas we have made a number of recommendations, some of which have still not been implemented. Below are some examples of our previous and planned work related to the jurisdiction of this committee regarding preparedness, response, and recovery issues related to health care, energy, the environment, and telecommunications.

Health Care Issues

Hurricane Katrina raised a number of health care concerns, and the preparedness of health care providers, their response capabilities, and health care agency and hospital capacity are all important in a major

disaster. The *National Strategy for Homeland Security* had a specific initiative to prepare health care providers for catastrophic events, such as major terrorist attacks.¹ However, in April 2003, we reported that many local areas and their supporting agencies may not have been adequately prepared to respond to such an event.² Specifically, while many state and local officials reported varying levels of preparedness to respond to a bioterrorist attack, they reported that challenges existed because of deficiencies in capacity, communication, and coordination elements essential to preparedness and response. These included workforce shortages, inadequacies in disease surveillance and laboratory systems, and a lack of regional coordination and compatible communications systems. Some of these challenges, such as those involving coordination efforts and communications systems, were being addressed more readily, whereas others, such as infrastructure and workforce issues, were more resource-intensive. Generally, we found that cities with more experience in dealing with public health emergencies were generally better prepared for a major disaster (such as a bioterrorist attack) than other cities, although challenges remain in every city. Almost a year later, in February 2004 we reported that although states had further developed many important aspects of public health preparedness, no state was fully prepared to respond to a major public health threat.³ Specifically, states had improved their disease surveillance systems, laboratory capacity, communications capacity, and workforce needed to respond to public health threats, but gaps in each remained. Moreover, regional planning among states was lacking, and many states lacked surge capacity—the capacity to evaluate, diagnose, and treat the large numbers of patients that would present during a public health emergency.

In terms of health care agencies and hospital capacities, we also found major deficiencies. In May 2003 we testified that while the efforts of public health agencies and health care organizations to increase their preparedness for major public health threats has increased, significant

¹See the *National Strategy for Homeland Security*, the White House, July 2002.

²See GAO, *Bioterrorism: Preparedness Varied Across State and Local Jurisdictions*, GAO-03-373 (Washington, D.C.: Apr. 7, 2003).

³See GAO, *Public Health Preparedness: Response Capacity Improving, but Much Remains to Be Accomplished*, [GAO-04-458T](#), (Washington, D.C.: February 12, 2004).

challenges remained.⁴ Specifically, we found most emergency departments across the country lacked the capacity to respond to large-scale infectious disease outbreaks. For example, although most hospitals across the country reported participating in basic planning activities for large-scale infectious disease outbreaks, few had acquired the medical equipment resources—such as ventilators—that would be required in such an event. Further, because most emergency departments already routinely experienced some degree of overcrowding, they may not be able to handle the sudden influx of patients that would occur during a large-scale infectious disease outbreak. Regarding hospital capacity, in August 2003 we reported that the medical equipment available for response to certain incidents (e.g., as a biological terrorist incident) varied greatly among hospitals.⁵ Additionally, many hospitals reported that they did not have the capacity to respond to the large increase in the number of patients that would be likely to result from incidents with mass casualties.

In our April 2003 report on preparedness, we made a number of recommendations to help state and local jurisdictions better prepare for a bioterrorist attack and to develop a mechanism for sharing solutions between jurisdictions. In response to this report, the Departments of Health and Human Services and Homeland Security concurred with GAO recommendations.

- We plan future work related to Hurricane Katrina regarding public health and health services, including mental health services issues. Specifically, we plan to conduct evaluations of evacuation plans for inpatient and long-term care health facilities; federal, state, and local preparedness plans for dealing with the health consequences of natural and man-made disasters; and provision of mental health services for evacuees and first responders.

Energy Issues

The wide-ranging effects of Hurricane Katrina on gasoline prices nationwide are a stark reminder of the interconnectedness of our petroleum markets and reveal the vulnerability of these markets to

⁴See GAO, *SARS Outbreak: Improvements to Public Health Capacity Are Needed for Responding to Bioterrorism and Emerging Infectious Diseases*, GAO-03-769T (Washington, D.C.: May 7, 2003).

⁵See GAO, *Hospital Preparedness: Most Urban Hospitals Have Emergency Plans but Lack Certain Capacities for Bioterrorism Response*, GAO-03-924 (Washington, D.C.: Aug. 6, 2003).

disruptions, natural or otherwise.⁶ These markets have become stressed over time, in part because of a proliferation of special gasoline blends that have raised costs and affected operations at refineries, pipelines, and storage terminals.⁷ As we noted in our recent testimony on energy markets, Hurricane Katrina did tremendous damage to homes, businesses, and physical infrastructure, including roads, electricity transmission lines, and oil producing, refining, and pipeline facilities.⁸ Because the Gulf Coast refining region is a net exporter of petroleum products to all other regions of the country, retail gasoline prices in many parts of the nation rose dramatically. A variety of factors determine how gasoline prices vary across different locations and over time. For example, gasoline prices may be affected by unexpected refinery outages or accidents that significantly disrupt the delivery of gasoline supply. Future gasoline prices will reflect the world supply and demand balance and continue to be an important factor affecting the American consumer for the foreseeable future, and the impact of gasoline prices is felt in virtually every sector of the U.S. economy. Some of our more significant open recommendations are that (1) the Environmental Protection Agency (EPA), with the Department of Energy (DOE) and others, develop a plan to balance the environmental benefits of using special fuels with the impacts these fuels have on the gasoline supply infrastructure, and (2) if warranted, EPA work with other agencies to identify what statutory or other changes are required to implement this plan. EPA declined to comment on our recommendations and did not signify agreement or disagreement with them.

- We plan future work on energy issues in order to better understand the vulnerability of the nation's energy infrastructure to natural or other disasters. Specifically, we plan to conduct evaluations of determinants of gasoline prices in particular, and the petroleum industry more generally, including world oil reserves; security of maritime facilities for handling and transporting petroleum, natural gas, and petroleum products; viability of the Strategic Petroleum Reserve to respond to

⁶For a primer on gasoline prices, see GAO, *Motor Fuels: Understanding the Factors That Influence the Retail Price of Gasoline*, GAO-05-525SP (Washington, D.C.: May 2, 2005).

⁷See GAO, *Gasoline Markets: Special Gasoline Blends Reduce Emissions and Improve Air Quality, but Complicate Supply and Contribute to Higher Prices*, GAO-05-421 (Washington, D.C.: June 17, 2005).

⁸See GAO, *Energy Markets: Gasoline Price Trends*, GAO-05-1047T (Washington, D.C.: Sept. 21, 2005).

disruptions such as Hurricane Katrina; and impacts of the potential disruption of Venezuelan oil imports.

Environmental Issues

Hurricane Katrina resulted in significant impacts on the area's environmental resources. The condition of environmental resources has an important role in both prevention and recovery from natural disasters. In the area of prevention, the U.S. Army Corps of Engineers has responsibility for constructing thousands of hurricane prevention and flood control projects throughout the country. The Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project was one such project that was authorized by Congress in 1965 to provide hurricane protection to New Orleans from a fast-moving Category 3 hurricane.⁹ Similarly, wetlands, once regarded as unimportant areas to be filled or drained for agricultural or development activities, are now recognized for a variety of important functions that they perform, including providing flood control by slowing down and absorbing excess water during storms; maintaining water quality by filtering out pollutants before they enter streams, lakes, and oceans; and protecting coastal and upland areas from erosion. Moreover, it has been suggested that wetlands act as a speed bump, slowing down storms almost as dry land does. The Fish and Wildlife Service reports that more than half of the 221 million acres of wetlands that existed during colonial times in what is now the contiguous United States have been lost. A reliable set of wetland acreage that could be used to evaluate the progress made in achieving the goal of "no net loss" of the remaining wetlands is unavailable. In the area of recovery, Hurricane Katrina poses an enormous challenge in terms of the cleanup of hazardous materials in the area. Industrial discharges, sewage, gas and oil from gas stations, household hazardous materials, pesticides, and chemicals, in addition to bacteria and viruses, contaminated the floodwaters. The long-term effects of these hazardous materials, the level of effort and coordination needed and the cost of decontamination and cleanup will take some time to determine.

In situations such as this, the Environmental Protection Agency (EPA) serves as the lead Agency for the cleanup of hazardous materials, including oil and gasoline. EPA emergency response personnel are working in partnership with FEMA and state and local agencies to help assess the damage, test health and environmental conditions, and

⁹ See GAO, *Army Corps of Engineers: Lake Pontchartrain and Vicinity Hurricane Protection Project*, GAO-05-1050T, (Washington, D.C.: Sept. 28, 2005).

coordinate cleanup from Hurricane Katrina. They are conducting water, air, and sediment testing, assessing drinking water and wastewater facilities, examining superfund and other hazardous waste sites affected by the storms, issuing environmental waivers, and providing public advisories regarding drinking water and the potential for hazardous debris in homes and buildings.

- We plan future work on environmental issues, such as evaluations of how EPA and other federal, state, and local agencies conduct water, soil, and air quality testing to determine when it is safe for residents to return to New Orleans and treatment of hazardous materials during the cleanup efforts and restoration of drinking water and wastewater facilities. We also plan to review the Army Corps of Engineers efforts to repair the integrity of the hurricane protection structures in the New Orleans area and assess issues relating to wetland losses.

Telecommunications Issues

Hurricane Katrina knocked out a wide variety of communications infrastructure. In addition, communication among emergency personnel is important in any disaster, and the *National Strategy for Homeland Security* called for seamless communications among all first responders and public health entities. However, in our August and November 2003 reports, we noted that insufficient collaboration among federal, state, and local governments had created a challenge for sharing public health information and developing interoperable communications for first responders.¹⁰ For example, states and cities had implemented many initiatives to improve information sharing, but these initiatives had not been well coordinated and risked creating partnerships that limited access to information and created duplicative efforts. Another challenge involved the lack of effective, collaborative, interdisciplinary, and intergovernmental planning for interoperable communications. For instance, the federal and state governments lacked a coordinated grant review process to ensure that funds are used for communications projects that complemented one another and added to overall statewide and national interoperability capacity.¹¹ Moreover, we testified in April 2004

¹⁰See GAO, *Homeland Security: Efforts to Improve Information Sharing Need to Be Strengthened*, GAO-03-760, (Washington, D.C.: Aug. 27, 2003); and *Homeland Security: Challenges in Achieving Interoperable Communications for First Responders*, GAO-04-231 (Washington, D.C.: Nov. 6, 2003).

¹¹See GAO, *Homeland Security Federal leadership and Intergovernmental Cooperation Required to Achieve First Responder Interoperable Communications*, [GAO-04-740](#) (Washington, D.C.: July 20, 2004).

that the Wireless Public Safety Interoperable Communications Program, or SAFECOM, had made very limited progress in achieving communications interoperability among all entities at all levels of government and had not achieved the level of collaboration necessary.¹² Finally, in our October 2003 report on public health preparedness, we reported that challenges existed in ensuring communication among responders and with the public.¹³ For example, during the anthrax incidents of 2001, local officials identified communication among responders and with the public as a challenge, both in terms of having the necessary communication channels and in terms of making the necessary information available for distribution.

We made a number of recommendations that DHS work, in conjunction with other federal agencies, to complete a database on communication frequencies, determine the status of wireless public safety communications nationwide, tie grant funding to statewide interoperability plans, and review the interoperability functions of SAFECOM. DHS has agreed to take some, but not all, of the corrective actions we recommended.

Concluding Observations

We have issued a number of reports relevant to evaluating Hurricane Katrina. In addition, the accountability community—including the IGs and GAO—has an active future agenda for evaluating the nation’s response to the hurricane. Congress has recently passed legislation that provided \$15 million for the DHS IG to audit and investigate Hurricane Katrina response and recovery activities.¹⁴ The DHS IG has developed a plan for oversight of the funds being spent directly by DHS components and the IGs of the 12 other departments and agencies that account for almost all of the remainder of the funds appropriated thus far. The primary objective of the IG plan is to ensure accountability, primarily through ongoing audit and investigative effort designed to identify and address waste, fraud, and abuse. Each IG will be issuing an individual report to ensure that the affected people, organizations, and governments receive the full benefit of

¹²See GAO, *Project SAFECOM: Key Cross-Agency Emergency Communications Effort Requires Stronger Collaboration*, GAO-04-494 (Washington, D.C.: Apr.16, 2004).

¹³See GAO, *Bioterrorism: Public Health Response to Anthrax Incidents of 2001*, GAO-04-152 (Washington, D.C.: Oct. 15, 2003).

¹⁴ Second Emergency Supplemental Appropriations Act to Meet Immediate Needs Arising from the Consequences of Hurricane Katrina, 2005, Pub. L. 109-62, 119 Stat. 190, 191 (2005).

the funds being spent and to be spent on disaster response and recovery programs. The DHS IG will coordinate the work of the respective IGs through regular meetings, and the overall account of funds will be coordinated with us through regular meetings with our senior officials.

As the IGs focus on fraud, waste, and abuse, GAO can provide Congress with more strategic evaluations on such issues as coordination among various agencies and state and local government and the private sector. Some of our past strategic work included reports in the wake of Hurricane Andrew in 1992¹⁵ and the terrorist attacks of September 11.¹⁶ Other strategic-level reports have covered such topics as barriers to interagency coordination,¹⁷ issues related to continuity of operations planning for essential government services,¹⁸ and DHS's efforts to enhance first responders' all-hazards capabilities.¹⁹ Many of our past reports, which provide a firm foundation for doing Katrina-related work, contain recommendations to improve top-level coordination. While several changes have occurred in terms of the government's structure and process for emergency preparedness and response, the extent to which many of our earlier recommendations have been fully implemented remains unclear.

In closing, we will continue to work with the accountability community and have already reached out to the relevant congressional committees, federal IGs, and state and local auditors in the affected states to coordinate our efforts, avoid unnecessary duplication, and most effectively utilize our resources. Comptroller General Walker has been personally and extensively involved in this effort and he plans to continue to be heavily involved.

¹⁵See GAO, *Disaster Management: Improving the Nation's Response to Catastrophic Disasters*, [GAO/RCED-93-186](#) (Washington, D.C.: July 23, 1993).

¹⁶See GAO, *September 11: Overview of Federal Assistance to the New York City Area*, [GAO-04-72](#) (Washington, D.C.: Oct. 31, 2003).

¹⁷See GAO, *Managing for Results: Barriers to Interagency Coordination*, [GAO/GGD-00-106](#) (Washington, D.C.: Mar. 29, 2000).

¹⁸See GAO, *Continuity of Operations: Improved Planning Needed to Ensure Delivery of Essential Government Services*, [GAO-04-160](#) (Washington, D.C.: Feb. 27, 2004).

¹⁹See GAO, *Homeland Security: DHS' Efforts to Enhance First Responders' All-Hazards Capabilities Continue to Evolve*, [GAO-05-652](#) (Washington, D.C.: July 11, 2005).

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Mr. Chairman, this concludes my statement. I would be pleased to respond to any questions that you or other members of the committee may have at this time.

**GAO Contacts and
Staff
Acknowledgments**

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. For further information about this testimony, please contact Norman Rabkin at (202) 512-8777 or at rabkinn@gao.gov, or William O. Jenkins, Jr., at (202) 512-8757 or at jenkinswo@gao.gov. This statement was prepared under the direction of Stephen L. Caldwell. Key contributors were Nancy Briggs, Christine Davis, David Lysy, Stephanie Sand, and Ashanta Williams.

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