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DISASTER RESPONSE

Criteria for Developing and Validating Effective Response Plans

Statement of William O. Jenkins, Jr., Director
Homeland Security and Justice Issues



GAO

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Highlights of [GAO-10-969T](#), a testimony before the Committee on Homeland Security, House of Representatives.

Why GAO Did This Study

Among the lessons learned from the aftermath of Hurricane Katrina was that effective disaster response requires planning followed by the execution of training and exercises to validate those plans. The Federal Emergency Management Agency (FEMA) is responsible for disaster response planning. This testimony focuses on (1) criteria for effective disaster response planning established in FEMA's *National Response Framework*, (2) additional guidance for disaster planning, (3) the status of disaster planning efforts, and (4) special circumstances in planning for oil spills. This testimony is based on prior GAO work on emergency planning and response, including GAO's April 2009 report on the FEMA efforts to lead the development of a national preparedness system. GAO reviewed the policies and plans that form the basis of the preparedness system. GAO did not assess any criteria used or the operational planning for the Deepwater Horizon response.

What GAO Recommends

GAO is not making any new recommendations in this testimony but has made recommendations to FEMA in previous reports to strengthen disaster response planning, including the development of a management plan to ensure the completion of key national policies and planning documents. FEMA concurred and is currently working to address this recommendation.

View [GAO-10-969T](#) or [key components](#). For more information, contact William O. Jenkins, Jr. at (202) 512-8757 or JenkinsWO@gao.gov.

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DISASTER RESPONSE

Criteria for Developing and Validating Effective Response Plans

What GAO Found

FEMA's *National Response Framework* identifies criteria for effective response and response planning, including (1) acceptability (meets the requirement of anticipated scenarios and is consistent with applicable laws); (2) adequacy (complies with applicable planning guidance); (3) completeness (incorporates major actions, objectives, and tasks); (4) consistency and standardization of products (consistent with other related documents); (5) feasibility (tasks accomplished with resources available); (6) flexibility (accommodating all hazards and contingencies); and (7) interoperability and collaboration (identifies stakeholders and integrates plans).

In addition to the *National Response Framework*, FEMA has developed standards that call for validation, review, and testing of emergency operations plans. According to FEMA, exercises offer the best way, short of emergencies, to determine if such plans are understood and work. FEMA's guidance also suggests that officials use functional and full-scale emergency management exercises to evaluate plans. Other national standards reflect these practices as well. For example, the Emergency Management Accreditation Program standards call for a program of regularly scheduled drills, exercises, and appropriate follow-through activities, as a critical component of a state, territorial, tribal, or local emergency management program.

GAO reported in April 2009 that FEMA lacked a comprehensive approach to managing the development of emergency preparedness policies and plans. Specifically, GAO reported that FEMA had completed many policy and planning documents, but a number of others were not yet completed. In February 2010, the Department of Homeland Security's (DHS) Office of Inspector General reviewed the status of these planning efforts and reported that the full set of plans for any single scenario had not yet been completed partly because of the time required to develop and implement the Integrated Planning System. The Integrated Planning System, required by Annex 1 to Homeland Security Presidential Directive 8 (December 2007), is intended to be a standard and comprehensive approach to national planning.

Oil spills are a special case with regard to response. The *National Response Framework* has 15 functional annexes that provide the structure for coordinating federal interagency support for a federal response to an incident. Emergency Support Function #10—Oil and Hazardous Materials Response Annex—governs oil spills. Under this function, the Environmental Protection Agency is the lead for incidents in the inland zone, and the U.S. Coast Guard, within DHS, is the lead for incidents in the coastal zone. This difference underscores the importance of including clear roles, responsibilities, and legal authorities in developing operational response plans.

Mr. Chairman and Members of the Committee:

I am pleased to be here this morning to discuss the importance of preparing, validating, and testing emergency operations plans for disaster response. Among the lessons learned from the aftermath of Hurricane Katrina was that effective disaster response requires planning followed by the execution of training and exercises to validate those plans. The development of detailed emergency operations plans and the validation of those plans through testing and exercising is a key component of effective disaster response planning. These plans are part of a broader cycle of emergency preparedness that includes policy development, planning and resource allocation, exercising and testing operational plans, and assessment and reporting.¹

To help guide federal emergency response planning, the Federal Emergency Management Agency (FEMA) developed the *National Response Framework*, in conjunction with a variety of stakeholders, as a blueprint for how the nation conducts response to hazards of any type, regardless of cause. The *National Response Framework*, which was issued in January 2008, describes planning as the cornerstone of national preparedness and a critical element for response to a disaster or emergency. Response plans define the roles and responsibilities of all those who will have a role in the response and the capabilities they will contribute to the effort and provide a blueprint for how the response will be directed, managed, and coordinated. In addition, in June 2010, as part of its Voluntary Private Sector Preparedness Accreditation and Certification Program, FEMA adopted three private sector standards for use by U.S. companies in emergency planning and response. These standards provide that organizations should test and evaluate the appropriateness and efficacy of their emergency response plans.²

My comments are based on our previously issued work on emergency planning and response over the last several years, including our April 2009 report on FEMA's efforts to lead the development of a national

¹ The elements of the emergency management framework are discussed in detail in our April 2009 report on the Federal Emergency Management Agency's efforts to lead the development of a national preparedness system. See GAO, *National Preparedness: FEMA Has Made Progress, but Needs to Complete and Integrate Planning, Exercise, and Assessment Efforts*, [GAO-09-369](#) (Washington, D.C.: Apr. 30, 2009).

² American National Standards Institute, *Organizational Resilience: Security, Preparedness, and Continuity Management Systems-Requirements with Guidance for Use ASIS SPC.1-2009* (Mar. 12, 2009).

preparedness system.³ Specifically, my testimony today focuses on (1) the criteria for effective disaster response planning established in FEMA's *National Response Framework*, (2) additional guidance for disaster response planning, (3) the status of national disaster response planning efforts, and (4) the special circumstances related to operational response planning for oil spills.

To address these objectives, we reviewed the policies and plans that form the basis of the preparedness system. These policies and plans include, among others, the *National Response Framework* and *National Preparedness Guidelines*, as well as the national integrated planning system and preliminary versions of related guidance to develop and integrate plans across federal, state, tribal, and local governments. We also reviewed the Department of Homeland Security's (DHS) Office of Inspector General report on the status of FEMA's disaster response planning efforts. For the purposes of this testimony, we did not assess any criteria used or the operational planning for the Deepwater Horizon response. More detailed information about our scope and methodology is included in our April 2009 report. We conducted this work in accordance with generally accepted government auditing standards.

National Response Framework's Criteria for Response Planning

The *National Response Framework* discusses several elements of effective response and response planning. The term response, as used in the *National Response Framework*, includes the immediate actions to save lives, protect property and the environment, and meet basic human needs. Response also includes the execution of emergency plans and actions to support short-term recovery. An effective, unified national response—including the response to any large-scale incident—requires layered, mutually supporting capabilities—governmental and nongovernmental. Indispensable to effective response is an effective unified command, which requires a clear understanding of the roles and responsibilities of each participating organization.

The *National Response Framework* employs the following criteria to measure key aspects of response planning:

³ See for example, [GAO-09-369](#), *GAO Actions Taken to Implement the Post-Katrina Emergency Management Reform Act of 2006* [GAO-09-95R](#) (Washington, D.C.: Nov. 21, 2008.), *National Response Framework: FEMA Needs Policies and Procedures to Better Integrate Non-Federal Stakeholders in the Revision Process* [GAO-08-768](#) (Washington, D.C.: June 11, 2008.), and *Catastrophic Disasters: Enhanced Leadership, Capabilities, and Accountability Controls Will Improve the Effectiveness of the Nation's Preparedness, Response, and Recovery System*, [GAO-06-618](#) (Washington, D.C.: Sept. 6, 2006.).

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- **Acceptability.** A plan is acceptable if it can meet the requirements of anticipated scenarios, can be implemented within the costs and time frames that senior officials and the public can support, and is consistent with applicable laws.
 - **Adequacy.** A plan is adequate if it complies with applicable planning guidance, planning assumptions are valid and relevant, and the concept of operations identifies and addresses critical tasks specific to the plan's objectives.⁴
 - **Completeness.** A plan is complete if it incorporates major actions, objectives, and tasks to be accomplished. The complete plan addresses the personnel and resources required and sound concepts for how those will be deployed, employed, sustained, and demobilized. It also addresses timelines and criteria for measuring success in achieving objectives and the desired end state. Including all those who could be affected in the planning process can help ensure that a plan is complete.
 - **Consistency and standardization of products.** Standardized planning processes and products foster consistency, interoperability, and collaboration, therefore, emergency operations plans for disaster response should be consistent with all other related planning documents.
 - **Feasibility.** A plan is considered feasible if the critical tasks can be accomplished with the resources available internally or through mutual aid, immediate need for additional resources from other sources (in the case of a local plan, from state or federal partners) are identified in detail and coordinated in advance, and procedures are in place to integrate and employ resources effectively from all potential providers.
 - **Flexibility.** Flexibility and adaptability are promoted by decentralized decisionmaking and by accommodating all hazards ranging from smaller-scale incidents to wider national contingencies.
 - **Interoperability and collaboration.** A plan is interoperable and collaborative if it identifies other stakeholders in the planning process with similar and complementary plans and objectives, and supports

⁴ A concept plan describes how capabilities are integrated and synchronized to accomplish critical tasks to meet objectives.

regular collaboration focused on integrating with those stakeholders' plans to optimize achievement of individual and collective goals and objectives in an incident.

Additional Guidance and Policy regarding Operational Plans and Testing

Under the Post-Katrina Emergency Management Reform Act, FEMA has responsibility for leading the nation in developing a national preparedness system.⁵ FEMA has developed standards—the *Comprehensive Preparedness Guide 101*—that call for validation, review, and testing of emergency operations plans (EOP).⁶ According to the *Comprehensive Preparedness Guide 101*, plans should be reviewed for conformity to applicable regulatory requirements and the standards of federal or state agencies (as appropriate) and for their usefulness in practice. Exercises offer the best way, short of emergencies, to determine if an EOP is understood and “works.” Further, conducting a “tabletop” exercise involving the key representatives of each tasked organization can serve as a practical and useful means to help validate the plan. FEMA’s guidance also suggests that officials use functional and full-scale emergency management exercises to evaluate EOPs. Plan reviews by stakeholders also allow responsible agencies to suggest improvements in an EOP based on their accumulated experience.⁷

We also identified the need for validated operational planning in the aftermath of Hurricane Katrina, noting that to be effective, national response policies must be supported by robust operational plans. In September 2006, we recommended, among other things, that DHS take the lead in monitoring federal agencies’ efforts to meet their responsibilities under the National Response Plan (now the *National Response Framework*) and the National Preparedness Goal (now the *National Preparedness Guidelines*), including the development, testing, and exercising of agency operational plans to implement their responsibilities.⁸ DHS concurred with our recommendation. The Post-Katrina Emergency Management Reform Act transferred preparedness responsibilities to

⁵ Pub. L. No. 109-295, § 644, 120 Stat. 1355, 1425 (2006).

⁶ Department of Homeland Security, Federal Emergency Management Agency, *Comprehensive Preparedness Guide (CPG) 101: Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans*. Mar. 2009.

⁷ For example, states may review local plans.

⁸ GAO, *Catastrophic Disasters: Enhanced Leadership, Capabilities, and Accountability Controls Will Improve the Effectiveness of the Nation’s Preparedness, Response, and Recovery System*, [GAO-06-618](#) (Washington, D.C.: Sept. 6, 2006.).

FEMA,⁹ and we recommended in April 2009 that FEMA should improve its approach to developing policies and plans that define roles and responsibilities and planning processes by developing a program management plan, in coordination with DHS and other federal entities, to ensure the completion of the key national preparedness policies and plans called for in legislation, presidential directives, and existing policy and doctrine; to define roles and responsibilities and planning processes; as well as to fully integrate such policies and plans into other elements of the national preparedness system.¹⁰ FEMA concurred with our recommendation and is currently working to address this recommendation.

Other national standards reflect these practices as well. For example, according to Emergency Management Accreditation Program (EMAP) standards, the development, coordination and implementation of operational plans and procedures are fundamental to effective disaster response and recovery.¹¹ EOPs should identify and assign specific areas of responsibility for performing essential functions in response to an emergency or disaster. Areas of responsibility to be addressed in EOPs include such things as evacuation, mass care, sheltering, needs and damage assessment, mutual aid, and military support. EMAP standards call for a program of regularly scheduled drills, exercises, and appropriate follow-through activities—designed for assessment and evaluation of emergency plans and capabilities—as a critical component of a state, territorial, tribal or local emergency management program. The documented exercise program should regularly test the skills, abilities, and experience of emergency personnel as well as the plans, policies, procedures, equipment, and facilities of the jurisdiction. The exercise program should be tailored to the range of hazards that confronts the jurisdiction.

⁹ 6 U.S.C. § 315.

¹⁰ [GAO-09-369](#).

¹¹ The EMAP standards are the voluntary national accreditation process for state, territorial, tribal, and local emergency management programs. Using collaboratively developed, recognized standards and independent assessment, EMAP provides a means for strategic improvement of emergency management programs, culminating in accreditation.

Status of National Disaster Planning Efforts

We reported in April 2009 that FEMA lacked a comprehensive approach to managing the development of emergency preparedness policies and plans.¹² Specifically, we reported that FEMA had completed many policy and planning documents, but a number of others were not yet completed. For example, while DHS, FEMA, and other federal entities with a role in national preparedness have taken action to develop and complete some plans that detail and operationalize roles and responsibilities for federal and nonfederal entities, these entities had not completed 68 percent of the plans required by existing legislation, presidential directives, and policy documents as of April 2009.

Specifically, of the 72 plans we identified, 20 had been completed (28 percent), 3 had been partially completed (that is, an interim or draft plan has been produced—4 percent), and 49 (68 percent) had not been completed. Among the plans that have been completed, FEMA published the Pre-Scripted Mission Assignment Catalog in 2008, which defines roles and responsibilities for 236 mission assignment activities to be performed by federal government entities, at the direction of FEMA, to aid state and local jurisdictions during a response to a major disaster or an emergency. Among the 49 plans that had not been completed were the *National Response Framework* incident annexes for terrorism and cyberincidents as well as the *National Response Framework's* incident annex supplements for catastrophic disasters and mass evacuations. In addition, operational plans for responding to the consolidated national planning scenarios, as called for in Homeland Security Presidential Directive 8, Annex 1, remained outstanding.

In February 2010, DHS's Office of Inspector General reviewed the status of these planning efforts and reported that the full set of plans for any single scenario had not yet been completed partly because of the time required to develop and implement the Integrated Planning System.¹³ The Integrated Planning System, required by Annex 1 to Homeland Security Presidential Directive 8 (December 2007), is intended to be a standard and comprehensive approach to national planning. The Directive calls for the Secretary of Homeland Security to lead the effort to develop, in coordination with the heads of federal agencies with a role in homeland security, the Integrated Planning System followed by a series of related

¹² GAO-09-369.

¹³ Department of Homeland Security, Office of Inspector General, *DHS' Progress in Federal Incident Management Planning* (Redacted), OIG-10-58 (Washington, D.C., Feb. 22, 2010.)

planning documents for each national planning scenario. The Homeland Security Council compressed the 15 National Planning Scenarios into 8 key scenario sets in October 2007 to integrate planning for like events and to conduct crosscutting capability development.¹⁴ The redacted version of the Inspector General's report noted that DHS had completed integrated operations planning for 1 of the 8 consolidated national planning scenarios¹⁵—the terrorist use of explosives scenario.¹⁶ FEMA officials reported earlier this month that the agency's efforts to complete national preparedness planning will be significantly impacted by the administration's pending revision to Homeland Security Presidential Directive-8. Once the new directive is issued, agency officials plan to conduct a comprehensive review and update to FEMA's approach to national preparedness planning.

In addition to FEMA's planning efforts, FEMA has assessed the status of catastrophic planning in all 50 States and the 75 largest urban areas as part of its Nationwide Plan Review. The 2010 Nationwide Plan Review was based on the 2006 Nationwide Plan Review, which responded to the need both by Congress and the President to ascertain the status of the nation's emergency preparedness planning in the aftermath of Hurricane Katrina. The 2010 Nationwide Plan Review compares the results of the 2006 review of states and urban areas' plans, functional appendices and hazard-specific annexes, on the basis of:

- Consistency with *Comprehensive Preparedness Guide 101*,
- Date of last plan update,
- Date of last exercise, and
- A self-evaluation of the jurisdiction's confidence in each planning document's adequacy, feasibility and completeness to manage a catastrophic event.

FEMA reported in July 2010 that more than 75 percent of states and more than 80 percent of urban areas report confidence that their overall basic

¹⁴ The eight scenarios are (1) explosives attack (terrorist use of explosives); (2) nuclear attack (improvised nuclear device); (3) biological attack (aerosol anthrax, plague, food contamination, foreign animal disease); (4) radiological attack (radiological dispersal devices); (5) chemical attack (blister agent, toxic industrial chemicals, nerve agent, chlorine tank explosion); (6) natural disaster (major earthquake, major hurricane); (7) cyberattack; and (8) pandemic influenza.

¹⁵ The DHS IG's report noted that DHS had completed five of the eight strategic guidance statements and four strategic plans. See DHS OIG-10-58.

¹⁶ To align with Homeland Security Presidential Directive 19, in July 2008 the improvised explosive device scenario was renamed the Terrorist Use of Explosives scenario.

emergency operations plans are well-suited to meet the challenges presented during a large-scale or catastrophic event.

Operational Response Plans for Oil Spill Responses

Oil spills are a special case with regard to response. For most major disasters, such as floods or earthquakes, a major disaster declaration activates federal response activities under the provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.¹⁷ However, for oil spills, federal agencies may have direct authority to respond under specific statutes. Response to an oil spill is generally carried out in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan.¹⁸ The *National Response Framework* has 15 functional annexes, such as search and rescue, which provide the structure for coordinating federal interagency support for a federal response to an incident. Emergency Support Function #10, the Oil and Hazardous Materials Response Annex, governs oil spills. As described in Emergency Support Function #10, in general, the Environmental Protection Agency is the lead for incidents in the inland zone, and the U.S. Coast Guard, within DHS, is the lead for incidents in the coastal zone. The difference in responding to oil spills and the shared responsibility across multiple federal agencies underscores the importance of including clear roles, responsibilities, and legal authorities in developing operational response plans.

In conclusion, Mr. Chairman, emergency preparedness is a never-ending effort as threats evolve and the capabilities needed to respond to those threats changes as well. Realistic, validated, and tested operational response plans are key to the effective response to a major disaster of whatever type. Conducting exercises of these plans as realistically as possible is a key component of response preparedness because exercises help to identify what “works” (validates and tests) and what does not. This concludes my statement. I will be pleased to respond to any questions you or other members of the committee may have.

Contacts and Acknowledgments

For further information on this statement, please contact William O. Jenkins, Jr. at (202) 512-8757 or JenkinsWO@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement.

¹⁷ 42 U.S.C. §§ 5121-5206.

¹⁸ The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, is the federal government’s blueprint for responding to both oil spills and hazardous substance releases.

Key contributors to this statement were Stephen Caldwell, Director, Chris Keisling, Assistant Director, John Vocino, Analyst-In-Charge, Linda Miller, Communications Analyst.

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