

June 2011

# FEMA

## Action Needed to Improve Administration of the National Flood Insurance Program





Highlights of GAO-11-297, a report to congressional committees

### Why GAO Did This Study

The National Flood Insurance Program (NFIP) has been on GAO's high-risk list since March 2006 because of concerns about its longterm financial solvency and related operational issues. Significant management challenges also affect the Federal Emergency Management Agency's (FEMA) ability to administer NFIP. This report examines (1) the extent to which FEMA's management practices affect the administration of NFIP: (2)lessons learned from the cancellation of FEMA's attempt to modernize NFIP's insurance management system; and (3) limitations on FEMA's authority that could affect NFIP's financial stability. To do this work, GAO reviewed internal control standards and best practices, analyzed agency documentation, reviewed previous work, and interviewed relevant agency officials.

#### What GAO Recommends

GAO makes 10 recommendations to improve the effectiveness of FEMA's planning and oversight efforts for NFIP; improve FEMA's policies and procedures for achieving NFIP's goals; and increase the usefulness and reliability of NFIP's flood insurance policy and claims processing system. GAO also presents three matters for congressional consideration to improve NFIP's financial stability. DHS concurred with all of GAO's recommendations.

View GAO-11-297 or key components. For more information, contact Orice Williams Brown at (202) 512-8678 or williamso@gao.gov. FEMA

## Action Needed to Improve Administration of the National Flood Insurance Program

### What GAO Found

FEMA faces significant management challenges in areas that affect NFIP, including strategic and human capital planning; collaboration among offices; and records, financial, and acquisition management. For example, because FEMA has not developed goals, objectives, or performance measures for NFIP, it needs a strategic focus for ensuring program effectiveness. FEMA also faces human capital challenges, including high turnover and weaknesses in overseeing its many contractors. Further, FEMA needs a plan that would ensure consistent day-to-day operations when it deploys staff to federal disasters. FEMA has also faced challenges in collaboration between program and support offices. Finally, FEMA lacks a comprehensive set of processes and systems to guide its operations, in particular a records management policy and an electronic document management system. FEMA has begun to address some of these challenges, including acquisition management, but the results of its efforts remain to be seen. Unless it takes further steps to address these management challenges, FEMA will be limited in its ability to manage NFIP's operations or better ensure program effectiveness.

FEMA also faces challenges modernizing NFIP's insurance policy and claims management system. After 7 years and \$40 million, FEMA ultimately canceled its latest effort (NextGen) in November 2009 because the system did not meet user expectations. As a result, the agency continues to rely on an ineffective and inefficient 30-year old system. A number of acquisition management weaknesses led to NextGen's failure and cancellation, and as FEMA begins a new effort to modernize the existing legacy system, it plans to apply lessons learned from its NextGen experience. While FEMA has begun implementing some changes to its acquisition management practices, it remains to be seen if they will help FEMA avoid some of the problems that led to NextGen's failure. Developing appropriate acquisitions processes and applying lessons learned from the NextGen failure are essential if FEMA is to develop an effective policies and claims processing system for NFIP.

Finally, NFIP's operating environment limits FEMA's ability to keep the program financially sound. NFIP assumes all risks for its policies, must accept virtually all applicants for insurance, and cannot deny coverage for high-risk properties. Moreover, additional external factors—including lapses in NFIP's authorization, the role of state and local governments, fluctuations in premium income, and structural and organizational changes—complicate FEMA's administration of NFIP. As GAO has previously reported, NFIP also faces external challenges that threaten the program's long-term health. These include statutorily required subsidized premium rates, a lack of authority to include long-term erosion in flood maps, and limitations on FEMA's authority to encourage owners of repetitive loss properties to mitigate. Until these issues are addressed, NFIP's long-term financial solvency will remain in doubt.

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#### Abbreviations

ARB	A consistion Deview Deend
CFO	Acquisition Review Board Chief Financial Officer
CIO	Chief Information Officer
COTR	Contracting Officer's Technical Representative
C&A	certification and accreditation
DHS	Department of Homeland Security
FEMA	Federal Emergency Management Agency
FIMA	Federal Insurance and Mitigation Administration
FISMA	Federal Information Security Management Act of 2002
FREE	Flood Rating Engine Environment
F2M	Flood Financial Management
GIS	Geospatial Information System
GPRA	Government Performance and Results Act of 1993
IFMIS	Integrated Financial Management Information System
IT	information technology
NAPA	National Association of Public Administration
NARA	National Archives and Records Administration
NextGen	Next Generation Flood Insurance Management System
NFIP	National Flood Insurance Program
OCAO	Office of the Chief Administrative Officer
OCCHCO	Office of the Chief Component Human Capital Officer
OCFO	Office of the Chief Financial Officer
OCIO	Office of the Chief Information Officer
OCPO	Office of the Chief Procurement Officer
OIG	Office of the Inspector General
OPPA	Office of Policy and Program Analysis
PFT	permanent full-time
PKEMRA	Post-Katrina Emergency Management Reform Act of 2006
PRP	Preferred Risk Policy
RiskMAP	Risk Mapping Assessment and Planning
SFHA	special flood hazard area
SQANet	Simple and Quick Access Net
•	-
Treasury TDDD	Department of the Treasury
TRRP	Transaction Record Reporting Process
WYO	write your own

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United States Government Accountability Office Washington, DC 20548

June 9, 2011

The Honorable Tim Johnson Chairman The Honorable Richard C. Shelby Ranking Member Committee on Banking, Housing and Urban Affairs United States Senate

The Honorable Spencer Bachus Chairman The Honorable Barney Frank Ranking Member Committee on Financial Services House of Representatives

The National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS), is a key component of the federal government's efforts to minimize the damage and financial impact of floods and is the only source of insurance against flood damage for most residents of flood-prone areas. Until 2004, NFIP was able to cover most of its claims with premiums it collected and occasional loans from the Department of the Treasury (Treasury) that were repaid. However, after the 2005 hurricanes—primarily Hurricane Katrina—the program borrowed \$16.8 billion from Treasury to cover the unprecedented number of claims. NFIP has subsequently borrowed additional funds from Treasury to make interest payments on this debt and, as of March 2011, owed approximately \$17.8 billion. Because of structural weaknesses in the way the program is funded and operated, NFIP is unlikely to be able to repay this debt in the near future, if ever.

As a result of the program's importance, level of indebtedness, and potential for future losses, we placed NFIP on our high-risk list in March 2006.<sup>1</sup> In earlier reports, we identified a number of operational challenges that hindered FEMA's ability to effectively administer NFIP and contributed to NFIP's placement on the list. For example, we found

<sup>&</sup>lt;sup>1</sup>GAO, GAO's High-Risk Program, GAO-06-497T (Washington, D.C.: Mar. 15 2006).

internal control weaknesses in FEMA's oversight of the write-your-own (WYO) insurers that are key to NFIP operations and that have received payments representing one-third to two-thirds of the premiums collected. We also found problems with the oversight of contractors responsible for performing key NFIP functions such as collecting NFIP data and marketing the program.

Because of the risks and challenges facing NFIP and the financial and operational weaknesses we had identified, we undertook a review to look for potential underlying management weaknesses that, if addressed, might improve the operation and functioning of the program. Specifically, our objectives were to (1) analyze the extent to which FEMA's key management practices—including strategic planning, human capital planning, intra-agency collaboration, records management, financial management, and acquisition management—affect the agency's ability to administer NFIP; (2) identify lessons to be learned from the cancellation of its most recent attempt to modernize NFIP's flood insurance policy and claims processing system, including to what extent key acquisition management processes were followed; and (3) describe factors that are relevant to NFIP operations and analyze limitations on FEMA's authority that could affect its financial stability.

To address these objectives, we collected available data from FEMA and conducted over 80 interviews with representatives from FEMA and their relevant bureaus or divisions. We also interviewed representatives of DHS's Office of the Inspector General, the National Association of Public Administration (NAPA), and KPMG LLP. These interviews allowed us to gather further insights into management challenges that affect NFIP.<sup>2</sup> In addition, we analyzed planning documents, policies, directives, materials, and data related to program, human capital, records, acquisition, and financial management. In the areas of human capital and financial management, we assessed the data provided to us and found it to be sufficiently reliable for the purposes of our report. The remaining audit work did not require a data assessment. Further, we reviewed relevant legislation, internal control standards, best practices, and external studies of FEMA's management challenges. We compared the information we obtained on NFIP's policies and procedures to relevant criteria developed by GAO and others. To determine the lessons to be learned from the NextGeneration Flood Insurance Management System (NextGen)

<sup>&</sup>lt;sup>2</sup>KMPG LLC conducts the annual DHS financial statement audit.

program's cancellation and to what extent key acquisition management processes were followed on NextGen, we analyzed a range of program documentation and interviewed cognizant program and contractor officials relevant to the following acquisition management disciplines: requirements development and management, test management, risk management, program oversight, and human capital management. For each discipline, we compared key program documentation, such as the concept of operations document; test plans for functional, regression, and usability testing; and NextGen application summary test reports, and risk management and program management plans. To identify external factors that affect NFIP's ability to carry out its mission, we reviewed our previous reports that analyzed various aspects of NFIP's policies, practices, and organizational structure, identifying factors that affected NFIP's operations but over which NFIP did not have control. To determine whether and to what extent the factors identified in these reports were still affecting NFIP's operations, and to identify any additional factors, we interviewed knowledgeable FEMA representatives and reviewed relevant testimony of FEMA officials before Congress. Appendix I provides additional details about our scope and methodology.

We conducted this performance audit from July 2009 to June 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. The evidence we obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

### Background

Overview of the National Flood Insurance Program	The National Flood Insurance Act of 1968 established NFIP as an alternative to providing direct disaster relief after floods. <sup>3</sup> NFIP, which makes federally backed flood insurance available to homeowners and businesses, was intended to reduce the federal government's escalating costs for repairing flood damage after disasters. Floods are the most common and destructive natural disaster in the United States. In fact, according to NFIP statistics, 90 percent of all national disasters in the United States have involved flooding. However, flooding is generally excluded from homeowners' policies that typically cover damages from other losses, such as wind, fire, and theft. Because of the catastrophic nature of flooding and the inability to adequately predict flood risks, historically, private insurance companies have largely been unwilling to underwrite and bear the risk that results from providing primary flood insurance coverage. Under NFIP, the federal government assumes the liability for the insurance coverage and sets rates and coverage limitations, among other responsibilities, while the private insurance industry sells the policies and administers the claims for a fee determined by FEMA.
	As of January 2011, 21,361 communities across the United States and its territories participated in NFIP by adopting and agreeing to enforce state and community floodplain management regulations to reduce future flood damage. In exchange, NFIP makes federally backed flood insurance available to homeowners and other property owners in these communities. Homeowners with mortgages from federally regulated lenders on property in communities identified to be in high-risk special flood hazard areas (SFHA) are required to purchase flood insurance on their dwellings for at least the outstanding mortgage amount. Optional lower-cost coverage is also available under NFIP to protect homes in areas of low to moderate risk. To insure furniture and other personal property items against flood damage, homeowners may purchase separate NFIP personal property coverage. Although premium amounts vary according to the amount of coverage purchased and the location and characteristics of

 $<sup>^3{\</sup>rm Pub.}$  L. No. 90-448, Title XIII, § 1302, 82 Stat. 476 (1968).

	the insured property, the average yearly premium was around \$620 as of October 2010. <sup>4</sup>
	NFIP is designed to pay operating expenses and flood insurance claims with premiums collected on flood insurance policies rather than with tax dollars. However, FEMA has statutory authority to borrow funds from Treasury to keep NFIP solvent in years when losses are high. NFIP, by design, is not actuarially sound because Congress authorized subsidized insurance rates to be made available for policies covering certain structures to encourage communities to join the program. As a result, NFIP is not able to build reserves to cover losses that exceed the historic averages.
Management of the National Flood Insurance Program	NFIP is managed by FEMA's Federal Insurance and Mitigation Administration (FIMA), with administrative support from FEMA's Mission Support Bureau (see fig. 1). DHS provides management direction by issuing guidance and working to integrate its various management processes, systems, and staff within and across its management areas. <sup>5</sup> Around 350 FEMA employees, assisted by contractor employees, manage and oversee NFIP and the National Flood Insurance Fund, into which premiums are deposited and from which claims and expenses are paid. Their management responsibilities include establishing and updating NFIP regulations, analyzing data to determine flood insurance rates, and offering training to insurance agents and adjusters. In addition, FIMA and its program contractors are responsible for monitoring and overseeing the

<sup>&</sup>lt;sup>4</sup>This number reflects the four components of the NFIP premium: (1) Building Coverage, (2) Contents Coverage, (3) Increased Cost of Construction Coverage, and (4) Federal Policy Fee.

<sup>&</sup>lt;sup>5</sup>GAO's 2009 high-risk list has designated Implementing and Transforming the Department of Homeland Security as a high-risk program. Also, see GAO, *Department of Homeland Security: Actions Taken Toward Management Integration, but a Comprehensive Strategy Is Still Needed*, GAO-10-131 (Washington, D.C.: Nov. 20, 2009) and *Department of Homeland Security: A Comprehensive and Sustained Approach Needed to Achieve Management Integration*, GAO-05-139 (Washington, D.C.: Mar. 16, 2005).

performance of the WYO insurance companies to help ensure that NFIP is administered properly.  $^{\rm 6}$ 

FIMA receives administrative and management support as well as direction on program operations from FEMA's Mission Support Bureau offices, including the Office of the Chief Administrative Officer (OCAO), Office of the Chief Component Human Capital Officer (OCCHCO), Office of the Chief Financial Officer (OCFO), Office of the Chief Information Officer (OCIO), and Office of the Chief Procurement Officer (OCPO).<sup>7</sup> In addition, FEMA's Office of Policy and Program Analysis (OPPA) serves a collaborative support role to provide leadership, analysis, coordination, and decision-making support on agency policies, plans, programs, and key initiatives. While Mission Support and OPPA provide important services to FIMA, their responsibilities do not include comprehensive oversight of FIMA or NFIP.

<sup>&</sup>lt;sup>6</sup>FIMA has three divisions with separate flood risk management functions: the Risk Analysis Division identifies flood risk, particularly through mapping efforts; the Risk Reduction Division involves flood plain management and manages a number of grant programs that help mitigate high-risk properties; and the Risk Insurance Division manages the insurance program.

<sup>&</sup>lt;sup>7</sup>During the course of this engagement, FEMA changed OCFO's reporting structure so that OCFO now reports directly to the FEMA administrator, as reflected in Figure 1 below.

Figure 1: FEMA Organizational Chart



Opportunities Exist to Improve FEMA's Management of NFIP	We found a number of management practices that could be improved to help FEMA more effectively administer NFIP. First, FEMA has not provided FIMA with strategic direction and guidance for administering NFIP and therefore lacks the starting point necessary to develop performance measures for assessing the program's effectiveness. Second, FEMA faces a number of human capital challenges, including developing a strategic human capital plan that addresses mitigating high turnover, hiring, and overseeing contractors that play a key role in NFIP. Moreover, it has yet to adequately address managing the day-to-day operations when deploying staff to respond to federal disasters. Third, collaboration among offices within FEMA that are responsible for administering NFIP has at times been ineffective, leading to challenges in effectively carrying out some key functions. In particular, FIMA, the office that administers NFIP, and FEMA Mission Support, which provides mission-critical functions such as information technology (IT), acquisition, and financial management, have had difficulties collaborating on these functions. Finally, FEMA does not have a comprehensive set of policies, procedures, and systems to guide its operations. Specifically, it lacks an updated records management policy, procedures to effectively manage unliquidated obligations, and a fully developed and implemented documentation of its business processes. FEMA has begun taking steps to improve its acquisition management and document some of its business processes, but as they were recently implemented or still in progress, the results of these efforts have yet to be realized. Unless it takes further steps to address these management challenges, FEMA will be limited in its ability to manage NFIP's operations or ensure program effectiveness.
A More Comprehensive Strategic Framework Would Improve FEMA's Administration of NFIP	FEMA published its most recent agencywide strategic plan in February 2011, but the plan did not clearly lay out how and where NFIP's mission and activities fit within FEMA's own goals and objectives. <sup>8</sup> The Government Performance and Results Act of 1993 (GPRA) requires agencies to submit a strategic plan containing a number of components, including a comprehensive mission statement, long-term goals and objectives for major operations, and strategies for achieving these goals and objectives. <sup>9</sup> Further, we have reported that an agency's strategic

<sup>&</sup>lt;sup>8</sup>FEMA, *Strategic Plan, Fiscal Years 2011-2014*, Publication 806, February 2011.

 $<sup>^9</sup>$  Pub. L No. 103-62, § 3, 107 Stat. 285 (1993), codified at 5 U.S.C. § 306. GPRA was recently amended by the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011).

planning effort is the most important element in results-oriented management and serves as the foundation for defining what the agency seeks to accomplish, identifying strategies to achieve desired results, and determining how well it succeeds in reaching its goals and objectives.<sup>10</sup> Leading results-oriented organizations focus on the dynamic and inclusive process of strategic planning, rather than on a strategic planning document, to provide a foundation for day-to-day activities and foster communication between the organization and its stakeholders. Moreover, the committee report accompanying GPRA stated that clear and precise goals enable an organization to maintain a consistent sense of direction regardless of the leadership changes that can occur frequently across the federal government.<sup>11</sup>

NFIP is a major operation with \$1.2 trillion in coverage and \$17.8 billion in debt that has remained on GAO's high-risk list since 2006. FEMA officials told us that FEMA chose not to prescribe goals and objectives for specific programs in its strategic plan as required by GPRA. They said that the agency chose a different strategic approach that would allow for more flexibility, something that was needed because FEMA must respond to emergencies as they occur. While FEMA may require flexibility in its operating environment, as a federal insurance program NFIP requires a more structured framework to help ensure that its operations are properly managed and allow for the development of effective performance measures. Unless FEMA provides FIMA with strategic direction and guidance for administering NFIP, the program risks not having a strategic focus that is aligned with agency goals and objectives or effective performance measures.

FIMA officials told us they were in the process of developing a strategy for mitigation and insurance but did not provide a specific timeline for completing or implementing it and did not provide details of what it might include. FIMA officials said they began developing the strategy in June 2010 and had created a steering committee with about 15 members representing various areas within FIMA. The committee held a summit with a number of stakeholders in November 2010 to validate the proposed mission, goals, and objectives of the organization before entering the

<sup>&</sup>lt;sup>10</sup>See GAO, *Agencies' Strategic Plans Under GPRA: Key Questions to Facilitate Congressional Review*, GAO/GGD-10.1.16 (Washington, D.C.: May 1997).

<sup>&</sup>lt;sup>11</sup>Senate Committee on Governmental Affairs, S. Rep. No. 103-58, 103d Cong., 1st Sess. (1993), at 15.

drafting process and expect to eventually publish the final strategy in the summer of 2011. Because these efforts have not yet been completed, whether the strategy will include adequate goals and objectives for administering and managing NFIP remains to be seen. Without goals and objectives and a firm timeline for completing them, NFIP will continue to lack a strategic direction.

FIMA officials said they had relied on other documents for strategic guidance, including FEMA- and DHS-level guidance and the agency's general mission-managing risks from all natural hazards to help free America from the burden of such disasters. However, without specific agency- or program-level goals, FIMA cannot ensure that any performance measures it develops for NFIP properly and adequately measure the program's success. According to GPRA, agencies should establish performance indicators to be used in measuring and assessing the relevant outputs, service levels, and outcomes of each program activity. Moreover, GAO's Standards for Internal Control in the Federal Government states that management should ensure that agencies establish and review performance measures and indicators.<sup>12</sup> As we have reported, performance goals and measures that successfully address important and varied aspects of program performance are key to a results-oriented work environment.<sup>13</sup> Measuring performance allows organizations to track the progress they are making toward their goals and gives managers critical information on which to base decisions for improving their programs. We have also reported that successful performance measures are, among other things, linked to core program activities.<sup>14</sup>

FIMA officials said that in recent years they had generally relied on five performance measures for NFIP that they reviewed quarterly:

• Percentage of the U.S. population (excluding territories) covered by local hazard mitigation plans that had been approved or were pending adoption.

<sup>14</sup>See GAO-03-143.

<sup>&</sup>lt;sup>12</sup>See GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

<sup>&</sup>lt;sup>13</sup>See GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, GAO-03-143 (Washington, D.C.: Nov. 22, 2002). In this report, GAO developed nine attributes of performance goals and measures based on previously established GAO criteria.

- Percentage of the national population whose safety had been improved through the availability of flood risk data in Geospatial Information System (GIS) format.
- Number of communities taking or increasing actions to reduce their risk from natural disasters.
- Potential property losses, disasters, and other costs avoided.
- NFIP premium income per \$100 dollars of combined operating expense and historical losses paid.<sup>15</sup>

However, FIMA recently revised its operating plan, which FIMA officials said aligns resources to major activities and provides transparency to FIMA's performance. In this revision, FIMA replaced the five measures with 11 new performance measures aligned with DHS's mission and relevant DHS goals. FIMA said that these measures are still under development but that it began testing these measures in fiscal year 2011 and plans to officially require and report them in fiscal year 2012. They are grouped into three levels—strategic, management, and activity—indicating how they are expected to be used and which units will be gathering and reporting information in support of these performance measures. The measures relate to a range of FIMA's activities including mitigation effectiveness, mapping progress, and NFIP operating efficiency.

However, FIMA has not had a set of strategic goals and objectives to guide its administration of NFIP. FIMA officials plan to include long-term goals and objectives in its upcoming strategic plan, but until this plan is complete and effectively implemented, FIMA will continue to be challenged by a lack of strategic focus and direction. Further, FIMA officials will be limited in their ability to understand and assess their effectiveness in administering NFIP and properly allocate its resources. Further, without a strategic plan specific to FIMA that incorporates specific goals and objectives for NFIP, determining whether FIMA's

<sup>&</sup>lt;sup>15</sup>FIMA officials said that FIMA previously required the regions and its three divisions to use and report on a much more robust set of performance measures—called "scorecards"—to supplement the five primary measures. However, when management changed in 2007, the measures were still new and staff were not yet using them. Current management no longer requires the regions and divisions to report these measures, and they have not been used since 2007. NFIP communities develop Hazard Mitigation Plans to understand the risks that hazards pose and include priorities for and strategies to avoid or minimize the undesired effects of hazards.

performance measures are aligned with and appropriately support FEMA's goals for NFIP is not possible. Without a robust set of goals and performance measures that are aligned and appropriately supported, FIMA is limited in its ability to monitor and hold management and staff accountable for program performance and take corrective actions as needed.

FEMA Lacks a Strategic Human Capital Plan That Meets Statutory Requirements and Addresses the Agency's Human Capital Challenges, Including Those Affecting NFIP The Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) required FEMA to develop a strategic human capital plan that included an assessment of the critical skills and competencies required for its workforce.<sup>16</sup> While FEMA developed a 2008-2012 Strategic Human Capital Plan, we found that the plan did not meet PKEMRA's requirements. PKEMRA required that the plan include an assessment of (1) the critical skills and competencies that would be needed in the workforce during the 10-year period after the law was enacted; (2) the skills and competencies of the FEMA workforce and projected trends in that workforce based on the expected losses due to retirement and other attrition; and (3) staffing levels for each category of employee and gaps that should be addressed to ensure that FEMA has continued access to the necessary critical skills and competencies. In addition, PKEMRA requires FEMA to develop a "Plan of Action" to address gaps in critical skills and competencies, including:

- specific goals and objectives for recruiting and retaining employees, such as recruitment and retention bonuses;
- specific strategies and program objectives to develop, train, deploy, compensate, motivate, and retain employees;
- specific strategies for recruiting staff with experience serving in multiple state agencies responsible for emergency management; and
- specific strategies to develop, train, and rapidly deploy a surge capacity force.

FEMA's plan—including a 2010 Human Capital Operational Plan—did not address all PKEMRA requirements. For example, it did not define the critical skills and competencies that FEMA would need in the coming

<sup>&</sup>lt;sup>16</sup>The Post-Katrina Emergency Management Reform Act of 2006 was enacted as Title VI of the Department of Homeland Security Appropriations Act, 2007, Pub. L. No. 109-295, 120 Stat. 1355 (2006).

years or provide specific strategies and program objectives to motivate, deploy, and retain employees, among other things. In an October 2009 report, NAPA also stated that FEMA's plan did not meet certain PKEMRA requirements, which the report described as being focused on understanding and planning for the current and future workforce. NAPA also recommended that FEMA strengthen its human capital planning.<sup>17</sup> One NAPA official noted that the 2008-2012 Strategic Human Capital Plan is essentially a "plan to develop a workforce plan."

We have noted in previous work that agencies should develop human capital strategies-including succession planning, training, and staff development—to eliminate gaps between current skills and competencies needed for mission success.<sup>18</sup> FEMA's human capital plan does not have strategies to address retention challenges or contractors, among other things. For example, FEMA experiences frequent turnover in key positions and divisions that can result in lost productivity, a decline in institutional knowledge, and a lack of continuity for remaining staff. Within the past several years, key leadership has also changed within several key FEMA offices that support FIMA in some NFIP activities. For example OCCHCO has hired its third chief in the last 2 years. Further, FEMA has experienced turnover in several of the offices that provide critical mission support services to NFIP. For example, OCPO, which had 88 permanent full-time (PFT) staff at the beginning of FY 2007, had lost 59 employees as of August 2010. FEMA staff told us the high turnover had resulted in the loss of institutional knowledge, specialized skills, and management continuity and efficiency.

FEMA also faces challenges in hiring, which has been a major focus of its workforce operations. As of the third quarter of fiscal year 2010, approximately 876 of FEMA's 4,916 funded positions were unfilled. Further, both FEMA program officials and OCCHCO, which screens candidates, said that OCCHCO often sent candidates without the requisite skills forward to the program offices that typically make the final hiring decisions. OCCHCO officials told us that in several instances program

<sup>&</sup>lt;sup>17</sup>National Academy of Public Administration (NAPA), *FEMA's Integration of Preparedness* and Development of Robust Regional Offices. (Washington, D.C.: October 2009).

<sup>&</sup>lt;sup>18</sup>See GAO, Human Capital: Key Principles for Effective Strategic Workforce Planning, GAO-04-39 (Washington, D.C.: Dec. 11, 2003), and Budget Issues: FEMA Needs Adequate Data, Plans, and Systems to Effectively Manage Resources for Day-to-Day Operations, GAO-07-139 (Washington, D.C.: Jan. 19, 2007).

offices had not properly aligned announcements and position descriptions, so that candidates appearing to meet the requirements of the position description did not meet the actual requirements of the position. OCCHCO officials added they were working to improve the situation.

FEMA also lacks accurate data on its current staffing levels, largely because of IT issues, exacerbating the difficulties of workforce planning. In a 2009 review of OCCHCO, NAPA found that frequent shifting of organizational resources over the previous 6 years, the lack of a single system to track and account for the workforce, complexities associated with tracking multiple workforce categories, and problems with FEMA's human resource management system had hindered efforts to obtain complete and accurate human capital data for review.<sup>19</sup> According to NAPA, these shortcomings had significant consequences in 2009, when FEMA established an informal hiring freeze because the number of staff hired exceeded authorized levels. In 2010, the Homeland Security Studies and Analysis Institute also found a discrepancy of around 700 filled positions between FEMA's manpower database and National Finance Center data.<sup>20</sup> The institute found that the two most common discrepancies in employee data were errors involving on the employees' work unit and activities. OCCHCO officials said they had also experienced difficulties with human resource management systems. Most recently, in 2010 DHS deployed the Talent Link system to manage its human resource needs, but the system was found to be incompatible with government human resource systems and processes. As a result, a few months after Talent Link was deployed DHS phased it out and moved FEMA to the USA Staffing system.

In addition, in spite of the importance of the work of contractors to NFIP's activities, FEMA does not centrally track the number of contractors or the type of work they do. For example, FIMA staff estimated that one of its divisions had as many as 10 contractors per FIMA staff member, and other FEMA staff said that they were unable to estimate the number of contractors. According to a FEMA Workforce Baseline Assessment conducted by the Homeland Security Studies and Analysis Institute, examining the federal workforce alone cannot fully assess FEMA's full

<sup>&</sup>lt;sup>19</sup>National Academy of Public Administration, *FEMA's Integration of Preparedness and Development of Robust Regional Offices* (Washington D.C.: October 2009).

<sup>&</sup>lt;sup>20</sup>Homeland Security Studies and Analysis Institute, *FEMA's Workforce Baseline* Assessment (Arlington, Va.: March 2010).

human capital capability.<sup>21</sup> The assessment went on to note that contract support must be considered in any discussion of FEMA staffing because contractors do not just supplement staff efforts but perform a substantial amount of FEMA's work. Unless FEMA tracks its contractors, it is severely limited in its ability to assess the total workforce and their respective roles and to plan for future staffing needs. However, pursuant to the Consolidated Appropriations Act of 2010, the head of DHS, which includes FEMA, is now required to prepare an annual inventory of service contracts it awards or extends through the exercise of an option.<sup>22</sup> The initial inventory was due not later than December 31, 2010, and annually thereafter. As part of the inventory, DHS must include the number and work location of contractor and subcontractor employees expressed as full-time equivalents for direct labor, compensated under the contract.<sup>23</sup>

FEMA told us it had begun developing an initial workforce assessment that it planned to complete in 2012, but the agency is uncertain whether it will include contractors in this study. According to FEMA staff, a new strategic human capital plan is also under review, and therefore, FEMA could not provide us with a copy. As a result, we were unable to determine whether it addressed PKEMRA's requirements and the human capital challenges that NFIP faces. Without a human capital plan that, at a minimum, meets PKEMRA's requirements, includes a comprehensive workforce assessment that identifies staffing and skills requirements, addresses turnover and staff vacancies, and analyzes the use of contractors, FEMA will continue to have difficulty hiring and retaining staff and managing its contractors.

<sup>&</sup>lt;sup>21</sup>See Homeland Security Studies and Analysis Institute, *Federal Emergency Management Agency Workforce Baseline Assessment, Final Report* (Arlington, Va.: Mar. 31, 2010).

<sup>&</sup>lt;sup>22</sup>Pub. L. No. 111-117, § 743, 123 Stat. 3034, 3216 (2009).

<sup>&</sup>lt;sup>23</sup>Full-time equivalent (FTE) is a measure of employment used by the federal government to calculate the total number of regular, straight-time hours worked by employees divided by the number of compensable hours applicable to each fiscal year.

Neither FEMA nor FIMA Has a Plan to Ensure That Key NFIP Operations Are Maintained When Staff Are Deployed During a Disaster

As we have previously reported, neither FEMA nor FIMA has a plan to help ensure that agency operations, including NFIP's, are maintained when a federal disaster is declared and staff are required to respond to it.<sup>24</sup> Without such a plan, FEMA faces the risk that some critical day-to-day functions may not be performed while staff are deployed, limiting the agency's ability to provide the necessary support for disaster relief missions. In addition to their responsibilities for day-to-day operations, FEMA employees are also expected to be on call during disasters for potential assignment to disaster-related activities, including deployment to field operations. FEMA staff told us that neither FIMA nor FEMA had a program-specific or agencywide plan that covered all of its staff and functions, including NFIP. According to a FEMA official, while program offices have some ability to make decisions about how many missioncritical staff to deploy to the field during a disaster and how many to keep in their office positions, the current administrator has made it clear that when a disaster hits, the priority is to deploy staff to the field.

As was the case with Hurricane Katrina, FEMA staff can be deployed for weeks or months and, during that time, are often performing duties in the field that take them away from their day-to-day responsibilities. According to a recent study by the Homeland Security Studies and Analysis Institute, FEMA staff found that operating normally during and immediately after a disaster was problematic due to staff deployment and an increased workload due to the disaster.<sup>25</sup> For this reason, planning for business continuity management and deployment planning are particularly important for the agency.<sup>26</sup> We previously reported that FEMA did not have guidelines on what constitutes a mission-critical position, had not conducted an assessment of the minimum level of support that would be necessary to keep the agency fully operational, and thus had limited

<sup>&</sup>lt;sup>24</sup>See GAO-07-139.

<sup>&</sup>lt;sup>25</sup>See Homeland Security Studies and Analysis Institute, *Federal Emergency Management Agency Workforce Baseline Assessment, Final Report;* (Arlington, Va.: Mar. 31, 2010). According to the Homeland Security Studies and Analysis Institute's March 2010 report, FEMA has approximately 9,000 temporary "surge" employees who were on call to respond to a disaster. In January 2010, half of these employees had declared themselves unavailable, and approximately 1,720 were deployed to 119 active disaster sites, leaving an actual surge capacity of around 2,800 staff.

<sup>&</sup>lt;sup>26</sup>The goal of business continuity planning management is to keep operations running in the event of a disruption to normal business practices. As a program, it includes activities such as planning, risk analysis, providing backup facilities, succession plans, and impact assessments.

guidelines for deciding who should be deployed.<sup>27</sup> In addition, the report found that nearly 57 percent of FEMA's permanent employees who are deployable do not have assigned deployment job titles or roles that would facilitate deployment during a disaster. Without a plan for deploying staff during a disaster, FEMA faces the risk that critical functions, such as managing NFIP operations, may not be performed while staff are deployed to the field during a natural disaster, increasing the likelihood that the agency will be unable to provide the necessary support for disaster relief missions.

Instances of Ineffective Collaboration between FIMA and Mission Support Have Complicated FEMA's Administration of NFIP

FIMA relies on Mission Support for a variety of mission-critical functions, including IT, acquisition, and financial management, but FIMA and Mission Support have faced challenges in collaborating with one another. In our prior work, we have identified eight practices that agencies can use to enhance and sustain their collaborative efforts:

- Define and articulate a common outcome.
- Establish mutually reinforcing or joint strategies.
- Identify and address needs by leveraging resources.
- Agree on roles and responsibilities.
- Establish compatible policies, procedures, and other means to operate across agency boundaries.
- Develop mechanisms to monitor, evaluate, and report on results.
- Reinforce agency accountability for collaborative efforts through agency plans and reports.
- Reinforce individual accountability for collaborative efforts through performance management systems.<sup>28</sup>

<sup>&</sup>lt;sup>27</sup>See GAO-07-139.

<sup>&</sup>lt;sup>28</sup>See GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005).

While these practices were originally developed for collaboration among federal agencies, they can apply to collaboration between FIMA and the offices that support it.

OCIO's stated function is to assist FEMA offices in IT development and to help ensure they follow the agency's established processes for IT system implementation. However, FIMA and OCIO faced challenges in agreeing on roles and responsibilities and establishing mutually reinforcing or joint strategies. For example, FIMA officials said they had experienced difficulty in the past getting timely approvals from OCIO for IT programs and contracts for NFIP and had sought ways to streamline the process, including using contractors rather than OCIO staff. FIMA officials also said that OCIO's certification and accreditation (C&A) process—which determines whether systems are certified to become operational-could be lengthy. They said they had to wait months for C&A approval for at least two mission-critical systems, one of which had been held up for about 9 months as of February 2010. One official said this problem had arisen because the C&A process lacked a formalized structure and communication between FIMA and OCIO was inadequate. OCIO officials acknowledged that some communication problems existed and said they were aware of FIMA's concerns. OCIO's primary concern, however, was that at times FIMA would perform IT functions independently from OCIO and believed that involving OCIO would help streamline IT development. For example, an OCIO official said that assessing and approving a \$1 million investment would require 30 to 45 days.

OCIO officials also said that 95 percent of FEMA's known systems were certified but noted that other systems, including some of FIMA's that affect NFIP, might have been developed independently of OCIO and thus lacked its approval. For example, in the past year OCIO discovered five FEMA human resources programs that were developed without its knowledge or involvement. OCIO now requires that all systems on FEMA's network complete the C&A process and be approved by the CIO, because undocumented systems can create risks that are difficult to correct. In accordance with the Federal Information Security Management Act of 2002 (FISMA), OCIO is creating an inventory of IT systems for each of FEMA's offices. OCIO officials said that once the portfolio lists had been verified, OCIO would address the backlog of pending C&As. FEMA also developed an Acquisition Review Board (ARB) to help ensure that IT systems within the agency are developed with the CIO's involvement, because the acquisition system requires the CIO's approval at key points in the IT development process.

Information Technology Systems Were Developed without Full Collaboration between FIMA and the Office of the Chief Information Officer OCIO is also taking steps to improve collaboration with FEMA's program offices, but it is too early to determine if the issues with FIMA have been fully addressed. For example, in January 2008 OCIO began assigning a customer advocate to each program office to help it better understand the IT needs of FEMA's program offices and to act as liaisons. The customer advocates are responsible for understanding all of the systems that are needed to support their assigned program offices and for regularly updating the CIO. FIMA's customer advocate said he met frequently with FIMA officials to resolve IT issues that arose and he was aware of only one major issue—the need to replace the legacy policy and claims processing system. While FIMA officials have mentioned a number of processes that could benefit from greater automation, including document management and budget formulation, it is unclear whether they have communicated these needs to their customer advocate. Until cooperation between FIMA and OCIO improves, FEMA will be unable to ensure that FIMA's and NFIP's IT needs are adequately met.

FEMA has exceeded its goals for awarding contracts to small businesses, but FIMA and OCPO have differed on the question of how the policy for setting aside these contracts should be implemented. The federal government's goal for participation by small business concerns is at least 23 percent of the total dollar value of all prime contract awards for each fiscal year. By comparison, FEMA's fiscal year 2010 goal of 31.9 percent was higher because, according to OCPO officials, DHS noticed that FEMA was exceeding its previous targets and wanted to provide incentives for continuing to exceed them.<sup>29</sup> In general, before setting aside a contract for competition among small businesses, an agency must conduct market research to determine whether there is a reasonable expectation of obtaining offers from at least two small businesses that could meet the contract's requirements. OCPO officials make this determination within FEMA. If the program office objects to the decision, OCPO generally asks the office to support its position. If a disagreement persists, the Head of Contracting Activity has traditionally resolved the disagreement

FIMA and the Office of the Chief Procurement Officer Have Differed on Implementing a Policy for Small Business Contracts

<sup>&</sup>lt;sup>29</sup>Within this overarching goal for participation by small business concerns are goals for small business concerns owned and controlled by service-disabled veterans, qualified HUBZone small business concerns, small business concerns owned and controlled by socially and economically disadvantaged individuals, and small business concerns owned and controlled by women. 15 U.S.C. 644(g)(1).

informally.<sup>30</sup> No formal process exists for resolving these disagreements or appealing decisions.<sup>31</sup>

FIMA officials said that in several instances the use of small business contracts has caused inefficiencies for NFIP. According to these officials, flood insurance work is better suited to large businesses. For instance, in 2007 OCPO decided to split one of FIMA's contracts—which covered many areas of NFIP, including marketing, training, and data management—into five smaller contracts that were more conducive to small business involvement. According to FIMA officials, OCPO did not involve FIMA sufficiently in this decision and did not sufficiently consider how it would affect FIMA, which would need additional staff to monitor the contractors and would lose experienced contractors. OCPO officials disagreed, noting, among other things, that the requirements for each contractor were outlined in the contract's solicitation and only contractors that could meet the requirements were considered.<sup>32</sup> No formal process exists for resolving the disagreement, and whether OCPO effectively communicated to FIMA how it could justify its position is unclear. Such disagreements indicate a need for those involved to improve their collaboration by establishing mutually reinforcing or joint strategies to achieve common outcomes.

According to FIMA officials, these disagreements have created inefficiencies that have required extra work to resolve—for instance, lengthening the time required to complete certain processes. Recognizing that it needed to improve its relationship with program offices, OCPO management appointed an individual to reach out to and help them

<sup>32</sup>FIMA staff also said that FEMA's attorneys had not allowed them to require that contractors have specific flood insurance experience. The attorneys said that doing so would improperly restrict competition and added they did not believe that the insurance experience required for contracts needed to be specifically with flood insurance.

<sup>&</sup>lt;sup>30</sup>The Head of Contracting Activity is a federal employee who, by position or appointment, is responsible for managing the entire acquisition function within an organizational element. This position is located within FEMA's Mission Support Bureau.

<sup>&</sup>lt;sup>31</sup>The Small Business Administration is responsible for assigning procurement center representatives (PCR) to major contracting offices at federal agencies to implement small business policies and programs. Each federal agency that has procurement authority is required to have an Office of Small and Disadvantaged Business Utilization (OSDBU) help oversee the agency's functions and duties related to the awarding of contracts and subcontracts to small and disadvantaged businesses. DHS requires its OSDBU to review every proposed new contract requirement estimated to exceed \$100,000 and all modifications to contracts involving new work not required under the original contract. DHS also requires its PCR to review all purchases greater than \$2 million.

recognize the value of OCPO's services. OCPO officials said that program offices now understand they must work with OCPO, and OCPO hopes to improve the relationship and help the program offices to better understand how beneficial the procurement office can be. OCPO officials said that the office now acts as an advocate for the program offices to DHS and helps improve communication by explaining to program offices the reasoning behind DHS's various requirements. Without further improvements in this area, however, FEMA cannot fully ensure that NFIP's acquisition needs are being met.

FIMA and OCFO have not fully coordinated solutions to FIMA's budget formulation process. FIMA officials said they could benefit from greater automation of the budget formulation process, which currently relies on FEMA's Integrated Financial Management Information System (IFMIS). In particular, FIMA officials have said they need a system for building their budget, a process that involves estimating expected policy fee revenue and identifying and allocating funds from six appropriations. OCFO currently provides FIMA with spreadsheets for formulating the budget that contain templates for the spending plans detailing the resources required to execute programs, projects, and activities. OCFO officials acknowledged that the current process was more time consuming and prone to data entry errors than an automated system would be. FIMA officials noted that using these spreadsheets was particularly challenging because of fluctuations in NFIP premium revenues.

To address some of these concerns, OCFO developed an automated budget formulation tool and is customizing it to meet the agency's needs. OCFO expects that the new tool will act as an interface with its current systems and ease budget formulation by eliminating the use of spreadsheets and allowing FIMA and other program offices to develop spend plans directly in the system. The tool became operational within OCFO in March 2011, and OCFO plans to implement it FEMA-wide on a rolling basis throughout fiscal year 2011 to allow time to train staff. However, both OCIO and FIMA said they did not have adequate input into the development of the new system, and the extent to which OCFO ever defined and documented system needs and requirements is unclear. In particular, FIMA officials said that OCFO may not have fully understood FIMA's needs regarding formulation and execution of NFIP's budget and the challenges created by fluctuating premium revenues.

Officials from KPMG, the auditor retained by DHS, also said they had noticed communication challenges within FEMA, particularly between FIMA and OCFO. For instance, KPMG found that FIMA had changed its

Coordination between the Office of the Chief Financial Officer and FIMA on Budgetary Needs Was Limited

	method for estimating its deferred revenue, and as DHS reported in 2008, had not communicated this change to OCFO. <sup>33</sup> While KPMG reports that this condition was corrected in fiscal year 2009, to prevent future problems the auditor recommended that FEMA develop better methods of communicating such changes. KPMG also found that FEMA had not completed its documentation of formal business policies and procedures for several of the roles, responsibilities, processes, and functions performed within FEMA. <sup>34</sup> Without better collaboration and communication between FIMA and OCFO, FEMA will be unable to fully ensure that NFIP's financial and budgetary needs are being met.
FEMA Lacks Electronic Systems and Related Policies That Could Improve Its Administration of NFIP	FEMA is a paper-based agency and has no centralized electronic document management system that would allow its administrative, regional, and program offices—including FIMA—to easily access and store documents. According to the National Archives and Records Administration (NARA), a record enters the document life cycle at its creation and remains in the system through its use, maintenance, and disposition. <sup>35</sup> Records enable and support an agency's ability to fulfill its mission, and because records contain information, taking a systematic approach to managing them is essential. According to NARA, effective records management helps deliver services in a consistent and equitable manner; facilitates effective performance throughout an agency; protects the rights of the agency, its employees, and its customers; and provides continuity in the event of a disaster. According to NARA, from a strategic perspective, agencies lacking effective records management policies and procedures can hinder their ability to respond swiftly to opportunities, events, incoming requests, and investigations, and to effectively implement policy. From an operational perspective, such agencies may waste internal resources searching for or recreating records, while at the same time incurring storage costs for records that are not properly purged. From a

<sup>&</sup>lt;sup>33</sup>DHS Office of the Inspector General, *Independent Auditor's Report on DHS' FY 2009 Financial Statements and Internal Control over Financial Reporting*, OIG-10-11 (Washington, D.C.: Nov. 13, 2009).

<sup>&</sup>lt;sup>34</sup>DHS Office of the Inspector General, *Independent Auditors' Report on DHS' FY 2010 Financial Statements and Internal Control over Financial Reporting*, OIG-11-09 (Washington, D.C.: Nov. 12, 2010).

<sup>&</sup>lt;sup>35</sup>NARA is an independent agency that oversees management of federal government records including presidential libraries and historic collections.

convictions from noncompliance with federal statutes, rules, and regulations. Finally, from a legal perspective, such agencies can use excessive time, costs, and resources during discovery in order to retrieve needed materials from poorly organized records.

According to a FEMA official, while there is broad consensus on the need for a centralized electronic document management system, currently no such system is in use. According to FEMA staff, FIMA has electronic systems in place for claims processing and correspondence recordkeeping, and FIMA's Risk Insurance Division has a system in place that is used for document archiving for its division. FEMA's Records Management Division told us it had instructed program offices needing a records management system immediately to continue the use of existing document management systems until DHS implements such a system. However, the agency has no policies or procedures in place for implementing such electronic systems. FEMA officials told us they had not implemented an agencywide system, even on an interim basis, because they were waiting for a decision from DHS on a centralized system.

Further, FEMA lacks effective and systematic procedures to fully ensure that it appropriately retains and manages its records.<sup>36</sup> While DHS has an overall records management directive, FEMA's agency-specific guidance is outdated. For example, the guidance does not provide clear direction on electronic recordkeeping but does contain direction on file cabinet sizes and the use of candles in file rooms. FEMA Records Management officials were unable to tell us when an updated directive would be forthcoming. FEMA officials also said they had a plan for annually updating file plans that staff were supposed to follow but did not have processes in place to ensure that the plans actually were updated.<sup>37</sup>

<sup>&</sup>lt;sup>36</sup>For purposes of federal records management laws and regulations, "records" include all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States government under federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the government or because of the informational value of the data in them. 44 U.S.C. § 3301.

<sup>&</sup>lt;sup>37</sup>A file plan is a comprehensive outline that includes the records series, file organization, active file locations, file transfer instructions, file retention and disposition instructions, and other specific instructions that provide guidance for effective management of records, including vital records.

As result of this lack of updated policy and guidance, FEMA's recordkeeping practices, which apply to NFIP, may not conform with the requirements of federal records management laws and regulations and may not adhere to Standards for Internal Controls in the Federal Government, which state that management should ensure that relevant, reliable, and timely information is available for decision making and external reporting.<sup>38</sup> For example, in our review, FEMA staff told us they were storing documents using a system of file rooms, personal file cabinets, and document-sharing software with limited staff access. According to FIMA staff, documents can be difficult to locate and at times have been lost or thrown away when staff separate from the agency. FEMA staff also told us they had faced decreased productivity due to lost packages, delays in budget execution and policy decisions, destroyed documents, and duplicated efforts. In addition, because FEMA staff are currently spread across several different locations in the Washington, D.C., area and 10 field offices across the country, progress in meeting NFIP goals can be slowed by staff's inability to locate, transfer, and archive documents across all of these locations.

FEMA has taken two actions that could help to ensure that its current paper-based records are effectively managed. First, in fiscal year 2010 DHS required all staff to take records management training on their individual responsibilities for maintaining agency records. FEMA officials told us this training was the first of its kind that the agency had offered. Second, FEMA has begun identifying staff to act as records liaison officers in each program office. Records liaison officers are responsible for helping ensure that records are kept in accordance with the agency's file plan. Agency officials told us they relied heavily on records liaison officers to provide oversight in these areas. However, FEMA has not vet identified records liaison officers for each section of the agency and has not yet conducted a review or audit to fully ensure that records were being systematically retained and managed. Until FEMA addresses the agency's immediate need for a centralized document management system and develops effective policies guiding the use of electronic systems, staff will continue to face challenges maintaining records, affecting FEMA's ability to make effective decisions and report accurately on its finances and operations.

<sup>&</sup>lt;sup>38</sup>Federal records management laws and regulations include provisions in chapters 21, 29, 31, and 33 of Title 44 of the U.S. Code, and their implementing regulations, as well as the Paperwork Reduction Act of 1980, as amended, 44 U.S.C. §§ 3501 et seq.

FEMA's Outdated Financial Management Systems and Processes Have Created Challenges and Left Unliquidated Obligations Unresolved Our review of FEMA's financial management found that staff faced multiple challenges in their day-to-day operations due to limitations in the systems they must use to perform these operations. OCFO staff told us that one of the greatest challenges they faced in carrying out their financial management responsibilities was using unautomated and often disparate systems. For example, they said that some of their systems for invoicing, travel management, and debt collection did not interface with FEMA's financial management system and, as a result, they had to manually enter data in FEMA's system. In addition, OCFO staff said that because their current travel management system was difficult and time consuming to use, they employed a paper-based process for staff travel. While FEMA has plans to implement a new system, a FEMA official told us the new system would also be time consuming to use-for example, it would not allow staff to process multiple travel orders in a short period of time, as would be required during emergency deployment. Finally, OCFO staff said that both the current debt collection and Department of Justice grant systems for nondisaster grants required that grant obligations be entered manually. According to FEMA officials, DHS is currently in the process of developing a DHS-wide grants management system; however, they estimated the system would take roughly a few more years to fully develop and implement.

The lack of automated systems for budget formulation and execution helped to make these tasks two of its biggest challenges. As we have seen, FIMA currently uses a system of spreadsheets to formulate fiscal year budgets and to track overall budget expenditure and specific line-item expenses. According to FIMA officials, spreadsheets can be corrupted and data are prone to errors because staff work on multiple versions. In addition, FIMA staff also told us they faced challenges with the paperbased tracking of requisition orders, which are sent between departments. In order to determine what was approved or not approved in the system on a daily basis, staff must manually track requisition packages through various offices. An agency official told us that the risks associated with this paper-based process were high and there had been instances in which packages were lost or signed for by unauthorized staff. These issues have been raised in past audits by the DHS's Office of the Inspector General (OIG).<sup>39</sup> While FIMA has begun to implement an automated tracking

<sup>&</sup>lt;sup>39</sup>DHS Office of the Inspector General, *Department of Homeland Security's Acquisition Data Management Systems*, OIG-10-42 (Washington, D.C.: Jan. 25, 2010) and *Challenges Facing FEMA's Disaster Contract Management*, OIG-09-70 (Washington, D.C.: May 8, 2009).

system, according to FEMA staff, the process was delayed due to IT challenges.

We have previously reported on weaknesses in FEMA's financial management processes.<sup>40</sup> For example, we reported that internal control weaknesses had impaired FEMA's ability to maintain transaction-level accountability; that FEMA's broader oversight structures such as WYO company audits, the triennial operational reviews of WYOs, and FEMA's claims reinspection program were limited in their effectiveness; and that FEMA's initiative to improve specific internal control weaknesses and the overall NFIP environment has done little to address many of the NFIP financial data deficiencies highlighted by the 2005 Gulf Coast hurricanes. In addition, we reported that the design of FEMA's financial reporting process increased the risk of inaccurate or incomplete data because it did not include transaction-level data and places an over reliance on manual data entry. Furthermore, our testing of transactions from the Bureau and Statistical Agent database found that many transactions either lacked or had incomplete insured names, addresses, or policy effective dates. As a result, we were unable to test the accuracy of reported insured premium amounts or whether policy premium information was complete.

Recent external audits of DHS's financial statements, performed by KPMG, have also identified material weaknesses in the area of unliquidated obligations.<sup>41</sup> As of March 2011, FEMA had a total of \$3.3 million in unliquidated obligations for NFIP-related funds that had been inactive for at least 5 years. According to a FEMA official, around \$3.0 million of these funds could potentially be deobligated and used for new obligations consistent with the purposes for which the funds were appropriated.<sup>42</sup> According to GAO's *Standards for Internal Control in the Federal Government*, transactions should be promptly recorded to maintain their relevance and value to management in controlling operations and making

<sup>42</sup>The \$3.0 million includes about \$61,000 that has been identified to be deobligated, \$739,000 that is currently under review, and \$2.17 million that requires review to close. Further, the current \$3.3 million had decreased from \$10.2 million in May 2010.

<sup>&</sup>lt;sup>40</sup>See GAO, Financial Management: Improvements Needed in National Flood Insurance Program's Financial Controls and Oversight, GAO-10-66 (Washington, D.C.: Dec. 22, 2009).

<sup>&</sup>lt;sup>41</sup>An unliquidated obligation, also called an undelivered order, is the value of goods and services ordered and obligated that have not been received. This amount may also include any orders for which advance payment has been made but for which delivery or performance has not yet occurred.

decisions. This applies to the entire process or life cycle of a transaction or event from the initiation and authorization through its final classification in summary records." Further, "control activities help to ensure that all transactions are completely and accurately recorded." In addition, "internal control and all transactions and other significant events need to be clearly documented, and the documentation should be readily available for examination." All documentation and records should be properly managed and maintained.

KPMG cited the unliquidated obligations issue as a material weakness in 2008 and as a significant deficiency in the 2009 and 2010 Consolidated DHS Audits. According to a FEMA official, in 2009 the agency issued an interim directive and procedures for addressing the unliquidated obligations issue. For example, it has started to verify the age of obligations older than 365 days and is working with points of contacts in program offices to certify that the unliquidated accounts are still open. However, OCFO told us that staff had sent memos to FIMA regarding this issue but that FIMA staff responded they were unaware of the amount of the unliquidated obligations and the potential amount that might be returned to FIMA. Unless FEMA implements processes to better monitor unliquidated obligations, including within FIMA, it could lead to inaccurate financial statements and affect DHS's overall budget.

FEMA Has Begun to Implement Changes in Its Acquisition Management Activities but Needs to Complete Key Steps FEMA has also identified a number of weaknesses in its oversight and management of acquisitions, and DHS and FEMA have taken a number of steps to improve these functions. However, because many of these steps have either been recently implemented or are still under development, the extent to which they will improve FEMA's acquisition management remains to be seen. FEMA's acquisition management has traditionally been guided by DHS's investment review process, which had four main objectives:

- Identify investments that perform poorly, are behind schedule or over budget, or lack capability, so officials can identify and implement corrective actions.
- Integrate capital planning and investment control with resource allocation and investment management.
- Ensure that investment spending directly supports DHS's mission and identify duplicative efforts for consolidation.

• Ensure that DHS conducts required management, oversight, control, reporting, and review for all major investments.<sup>43</sup>

FEMA performs three types of acquisition activities: (1) acquisition programs, which typically provide a tangible capital asset; (2) enterprise service contracts, which provide a service with a direct impact on FEMA's ability to carry out its mission; and (3) nonenterprise service contracts, which provide a service but do not have a direct impact on FEMA's ability to carry out its mission. Historically, some FEMA investments have been funded despite not receiving adequate review or oversight. Most notably, the NextGen system went forward without the necessary reviews and failed after 7 years and an investment of \$40 million.<sup>44</sup> Further, the \$1 billion Risk Mapping Assessment and Planning (RiskMAP) program, which is an effort to modernize flood hazard mapping, was funded without receiving approval from the review board. OCPO officials said that this former DHS review board did not sufficiently meet the department's acquisition oversight needs, leading DHS to issue an interim acquisition directive in November 2008 and a final directive in January 2010.<sup>45</sup> The directive provides an overall policy and structure for acquisition management within DHS describing the Acquisition Life Cycle Framework, Acquisition Review Process, and ARB, and outlines management procedures and responsibilities related to various aspects of acquisition.

Because the DHS acquisition directive allows its component agencies to set internal acquisition processes and procedures as long as they are consistent with the DHS directive, in August 2010 OCPO began drafting its own acquisition directive and a handbook explaining how to implement it. FEMA had circulated its directive, for comments, and OCPO officials expect it will be completed within 30 days after comments have been collected and incorporated.<sup>46</sup>

<sup>&</sup>lt;sup>43</sup>DHS Management Directive No.1400, *Investment Review Process*, Draft Version 2.0 (March 2006).

<sup>&</sup>lt;sup>44</sup>The NextGen system was intended to (1) collect data to determine premium rates, (2) collect data on flood claims, (3) track the progress of policies and claims, and (4) prepare legislatively mandated reports for Congress.

<sup>&</sup>lt;sup>45</sup>DHS Acquisition Directive No. 102-01, Draft Version 1.9 (Nov. 7, 2008) and DHS Acquisition Management Directive No. 102-01, (Jan. 20, 2010).

 $<sup>^{46}\</sup>mbox{While FEMA}$  currently lacks its own acquisition directive, it is still expected to adhere to the DHS guidance.

One important component of acquisition management is reviewing programs through an ARB. FEMA created its ARB in July 2009 and had held four meetings as of January 2011. FEMA's ARB includes two co-chairs (the Deputy Administrator and the Component Acquisition Executive), representatives from FEMA's various program offices, heads of Mission Support's various offices, and others. While FEMA can choose to review any acquisition activity, it requires that certain items be presented to the ARB, including all acquisition programs with life cycle costs of more than \$50 million and enterprise service contracts with annual expenditures greater than \$20 million.<sup>47</sup> As of January 2011, DHS recognized nine FEMA programs requiring FEMA ARB review.<sup>48</sup> Seven of these—including the \$1 billion RiskMAP program—had gone through the FEMA ARB as of January 2011, and FEMA plans to review the other two, as well as others, in fiscal year 2011. As it continues to review its portfolio of programs, it expects to add additional programs to this list. In particular, OCPO is examining FIMA's acquisition activities and considering adding NFIP operations to its ARB list.

FEMA has also faced challenges in the acquisition and oversight of its contractors, which are critical to NFIP. Both OCPO and FIMA officials said there had been communication challenges between contracting officers who were part of OCPO and Contracting Officer's Technical Representatives (COTR) who report to the contracting officers but also work in the program offices. OCPO officials said that many COTRs were loyal to their program office and communicated with contracting officers only when a problem arose. FIMA officials said that contracting officers had at times been unresponsive to them, particularly when reporting contractor discrepancies. Moreover, both we and KPMG previously noted weaknesses in FEMA's oversight of contractors. For example, we reported that a lack of monitoring records, an inconsistent application of procedures, and a lack of coordination diminished the effectiveness of

<sup>&</sup>lt;sup>47</sup>The DHS ARB is required for acquisition programs at or above \$300 million in life cycle costs and enterprise service contracts at or above \$100 million in annual expenditure.

<sup>&</sup>lt;sup>48</sup>These programs include Disaster Assistance Improvement Plan (DAIP), Grants Management Integrated Environment (GMIE), Housing Inspection Services (HIS), Integrated Public Alert and Warning System (IPAWS), Logistics Supply Chain Management System (LSCMS), Mt. Weather Emergency Operations Center (MWEOC), National Medical Transport and Support Contract (NMTSC), Responder Support Camp (RSC), and Risk Mapping Assessment and Planning (RiskMAP).

FEMA's monitoring of NFIP-related contracts.<sup>49</sup> Further, KPMG officials said that FIMA did not provide sufficient oversight of its contractors, something that is of particular concern because FIMA has a relatively high proportion of contractor staff. Moreover, DHS's OIG found that acquisition personnel could not locate a number of contract files that were part of its review including one for a \$3 million flood risk assessment contract.<sup>50</sup> The report said that missing contract files created uncertainties, including whether proper contracting procedures were followed, contractors were held accountable for goods and services, and tax dollars were appropriately spent.

To correct some of its acquisition challenges, FEMA issued a directive in September 2009 to clarify the roles, responsibilities, and requirements of COTRs in contract administration.<sup>51</sup> This directive includes, among other things, a COTR Tiered Certification Program consisting of credentialing and compliance, and FEMA plans to train all of its COTRs to their appropriate certification levels by March 2011. Providing further guidance, FEMA also issued a COTR handbook in February 2009.<sup>52</sup> Among other things, the handbook includes training requirements, duties, monitoring and surveillance procedures, and documentation requirements. In May 2010, OCPO began a technical review of COTRs' Contract Administration Files to better ensure that COTRs were adequately documenting their contracts. OCPO officials also said that, realizing the importance of outreach to FEMA's program offices, they had developed and funded a "How to Work with Us" training course and held the agency's first annual program management seminar. Moreover, officials from FIMA's Risk Insurance Division said they had changed their process for monitoring contractors, including requiring the contractors to submit monthly monitoring reports. As we have seen, most of these actions are relatively new, and some have not been fully implemented. While these steps need to be taken, the extent to which they will ensure effective oversight of

<sup>&</sup>lt;sup>49</sup>See GAO, National Flood Insurance Program: Financial Challenges Underscore Need for Improved Oversight of Mitigation Programs and Key Contracts, GAO-08-437 (Washington, D.C.: June 16, 2008).

<sup>&</sup>lt;sup>50</sup>DHS Office of the Inspector General, *Department of Homeland Security's Acquisition Data Management Systems*, OIG-10-42 (Washington, D.C.: Jan. 25, 2010).

<sup>&</sup>lt;sup>51</sup>FEMA, Directive FD 228-1, Contracting Officer's Technical Representative (COTR) (Sept. 28, 2009).

<sup>&</sup>lt;sup>52</sup>FEMA, Contracting Officer's Technical Representative (COTR) Handbook, Version 1 (February 2009).

FEMA's acquisition activities remains to be seen. Unless FEMA sets a firm timeline for implementing these actions, the agency will continue to have difficulty determining whether its acquisition processes are cost-effective, particularly those involving contractors.

FEMA's Emergency Response Culture May Make Implementing New Processes a Challenge, but Efforts to Improve Business Processes, including within FIMA, Have Been Initiated

Several FEMA officials and staff told us that the emergency response culture within the agency could create resistance to implementing formal business processes, many of which involve NFIP. For example, several staff suggested that difficulties in following business processes were in part linked to FEMA's emergency response culture-that is, its commitment to responding to disasters rather than strategically planning how its response could be improved by implementing more efficient office systems, policies, and processes. Further, agency officials told us that FEMA staff generally believed that formal or bureaucratic processes could impede their progress. Officials suggested that these cultural issues had led to both a general unwillingness to follow business processes at the staff level and limited commitment to planning and oversight at the management level. One FEMA official said that while FEMA's culture was part of the challenge, the agency had expanded after September 11 and has doubled in size since the 2005 Gulf Coast Hurricanes without commensurate adjustments in processes and systems. FEMA staff also told us that because many of FEMA's processes were manual, FEMA's culture had become dependent on people, with staff relying on personal relationships to accomplish tasks.

However, FEMA's Mission Support Bureau told us it had begun a business process improvement effort in early 2009 that involved mapping the current processes, analyzing them, and determining what changes and improvements were needed. FEMA officials stated that the business process issues arose because FEMA expanded significantly after September 11, 2011, and the agency added new processes to existing ones without making necessary adjustments to ensure that the new processes were efficient. For example, the process for staff who were separating from the agency was mapped as having 117 steps and was streamlined to 88 steps. The bureau also determined that personnel actions for the regions were done differently than they were for FEMA headquarters. Mission Support officials said that as of July 2010 they had completed process maps and new internal control frameworks that affect NFIP.

FEMA staff stated that Mission Support had completed several processes in areas such as COTR appointment and reappointment, printing, Freedom of Information Act requests for contract-related records, personnel actions, access control to headquarters facilities, hiring and separating for headquarters employees, workers compensation, annual property inventory, and the 40-1 requisition process. A FEMA official told us that staff had discovered numerous processes that either they did not realize they had, were different than those previously assessed, or were needed but did not exist. Mission Support staff said they had also found many work-around processes and processes that were poorly documented or duplicated at different places in the agency. FEMA officials told us they had tentative plans to roll out the initial changes to processes throughout relevant mission teams in 2011. In addition, FIMA officials told us they had plans to undertake a separate effort to map seven other business processes, including those for requisitions, hiring, congressional correspondence, and salaries and benefits. Until these mapping processes are complete and related internal control processes are developed, a risk exists that certain functions will be inconsistently or incompletely carried out and adversely affect FEMA's management of NFIP.

Acquisition Management Weaknesses Led to Cancellation of NFIP's System Modernization Project and Offer Lessons for Future Modernization Efforts	An important example of weaknesses in NFIP's acquisition management activities is the cancelled development of the Next Generation Flood Insurance Management System (NextGen). Despite investing roughly 7 years and \$40 million, FEMA cancelled this project in November 2009 because it failed to meet user expectations. As a result, NFIP must now continue to rely on a 30-year old flood insurance management system that does not fully support NFIP's mission needs and is costly to maintain and operate. A number of acquisition management weaknesses contributed to the project's failure and cancellation, and as FEMA begins anew to modernize the existing legacy system, it plans to apply lessons learned from its NextGen experience. As mentioned earlier in this report, FEMA has already implemented some changes to its acquisition management practices. However, whether these changes will better enable FEMA to avoid the problems that derailed the development and implementation of the NextGen system remains to be seen.
FEMA Cancelled Its NextGen Project in November 2009 and Continues to Rely on Outdated Existing System	NFIP currently uses a flood insurance policy and claims processing system that was developed 30 years ago. The system is designed to (1) collect data to determine flood insurance premium rates for specific properties, (2) collect data on claims made on properties that have had flood-related damage, (3) track the progress of policies and claims, and (4) prepare legislatively mandated reports for Congress. According to FEMA officials, this system is neither efficient nor effective and does not adequately support the program's mission needs. For example:
- Staff must manually input data, potentially increasing the possibility of data errors that can take as long as 6 months to correct.
- The system provides limited access to data needed to manage the program, including policy and claims data provided by WYO insurers, which currently requires time-consuming and laborious steps to view and change a given file.
- The system employs 1980s mainframe technology and uses programming languages that were current in the 1960s but are not widely used today. As a result, the system is costly and difficult to maintain.
- The system can enforce restrictions on policies or claims only at the end of each processing cycle. As a result, the number of errors that occur during policy or claim processing is higher than it would be if such restrictions were enforced earlier. Correcting these errors can add as much as 2 to 3 months to the processing cycle.

NFIP's attempts to modernize the existing system date back to at least the mid-1990s, when NFIP tried to move the system's applications and data onto a more modern hardware and software infrastructure. However, this effort was not successful and was cancelled in the late 1990s. According to NFIP officials, the effort failed in part because system users were not sufficiently involved in the design process and project management capabilities were inadequate.

In 2002, NFIP awarded a contract for the development of the NextGen system, which was to be deployed and operational by April 2007. According to program plans, NextGen was to employ modern technology and reengineered business processes to, among other things, improve the accuracy and completeness of policy and claims data and provide 24-houra-day transaction processing and customer service. To meet these goals, five system applications were to be developed, all of which were to be supported by a new centralized database.

1. **Transaction Record Reporting Process (TRRP)**, which was to collect data from the WYO insurers and flood insurance vendors on policies and claims, conduct front-end balancing of financial data,

perform checks for errors in issued policies and processed claims, and develop financial and statistical reports.  $^{\rm 53}$ 

- 2. **Simple and Quick Access Net (SQANet)**, which was to permit standardized and customized reporting of NFIP data.
- 3. **Flood Rating Engine Environment (FREE)**, which was to generate online flood insurance rates and quotes.
- 4. **Flood Financial Management (F2M)**, which was to provide an interface for NFIP financial stakeholders (NFIP bureaus, WYO companies, and vendors) to enter, update, submit, and process monthly financial data.
- 5. **ezClaims**, which was to provide an interface for authenticated claimants to view, edit, and process disaster and claims data.

To deliver the system, the contractor adopted a spiral development methodology, which involves the development of prototype applications that are tested and assessed by users and refined accordingly. Between 2004 and 2007, the five NextGen system applications and the supporting centralized database were prototyped, pilot tested, and modified. In May 2008, a production version of NextGen was placed into operational use. Shortly thereafter, however, users began reporting serious problems with the system's performance, such as inaccurate calculations and erroneous data. For example, the system showed no claims received or processed for the entire state of Alaska, despite the fact that the legacy system showed numerous claims.

Shortly thereafter, NFIP decided to revert to its legacy system, and as a result was forced to extend this system's operations and maintenance contract. At the same time, NFIP decided to conduct user testing on NextGen in late 2008 and early 2009. During this testing, system users identified additional problems, causing FEMA leadership to establish an Executive Steering Committee to decide how best to proceed. The committee included FEMA's Director for Acquisition Management, Chief

<sup>&</sup>lt;sup>53</sup>According to FEMA, about 95 percent of NFIP policies are written by insurance agents who represent private insurance companies that issue policies and process flood claims under their own names (write-your-own, or WYO, insurers). The other 5 percent of the policies are sold and serviced by state-licensed insurance agents and brokers that rely on FEMA for claims processing.

	Information Officer (CIO), Assistant Administrator for Mitigation, and other senior-level executives. To support the steering committee, two assessments were performed: one by the DHS Emergency Management Inspector General that focused on FIMA's management and oversight of both the legacy system contractor and the NextGen contractor; and one by OCIO that focused on what could be salvaged from NextGen. In November 2009, based on interim results from the assessments, FEMA leadership decided to cancel NextGen.
	In June 2010, FEMA leadership transferred responsibility for modernizing NFIP's legacy system to OCIO. According to the CIO, the next attempt to modernize NFIP's legacy system will begin with a determination of the "degree of fit" between the NextGen applications and NFIP's business requirements. To meet this goal, OCIO intends to first develop a clear understanding of NFIP's business requirements. Next, it will test the NextGen software applications against these requirements to determine what gaps exist. During this time, OCIO also intends to establish a project office capable of managing the effort. As of March 2011, OCIO has hired a new project executive and project manager and is in the process of developing project management documentation, such as a mission needs statement and capability development plan.
	NFIP will now have to rely on its legacy system for an unspecified period of time. As a result, NFIP's ability to manage its flood insurance operations will continue to be hampered by this system's limitations. In addition, NFIP will have to continue to invest in the operations and maintenance of this system, which between June 2009 and June 2010 cost approximately \$9.35 million to operate and maintain. According to the FEMA Acting Assistant Administrator for Mitigation, NFIP is currently in the process of negotiating a 2-year contract extension for operating and maintaining the legacy system.
Acquisition Management Weaknesses Led to the Cancellation of NextGen	Weaknesses in several key system acquisition areas led to NextGen's failure and cancellation. Specifically, business and functional requirements were not sufficiently defined; system users did not actively participate in determining the requirements for the development of system prototypes or in pilot testing activities; test planning and project risks were not adequately managed; and project management office staffing was limited. These weaknesses can, in turn, be attributed in large part to a general lack of executive-level oversight and attention to the project's status.

#### NextGen Requirements Were Not Well Defined

Well-defined requirements are a cornerstone of effective system acquisition. According to recognized guidance, documenting and implementing a disciplined process for developing and defining requirements can help reduce the risk of developing a system that does not perform as intended and does not meet user needs.<sup>54</sup> Such a process includes, among other things, (1) establishing a complete and unambiguous set of high-level requirements that can form the basis for defining the more detailed requirements that guide system development, and (2) involving users throughout the development process. For NextGen, neither of these conditions were met.

According to industry practices, high-level system requirements become the basis for the development of more detailed requirements that, in turn, can be used to develop specific software. Without complete and clear high-level requirements, sufficiently defining the more detailed requirements will be unlikely, in turn creating the risk that the resulting system will not meet users' needs. While NFIP did conduct activities intended to elicit NextGen requirements, these requirements-which NFIP refers to as "business requirements"—were neither complete nor clear. Specifically, NFIP established five working groups to review and refine business processes and provided the NextGen system developer with NFIP operational manuals. These five groups, which were associated with five business areas-claims, marketing, financial management, underwriting, and information technology-were each expected to produce a set of recommended business requirements. However, FEMA officials described the groups' efforts as largely based on oral communications, resulting in misunderstandings and poorly documented requirements. For example, one working group produced four different models of business processes, all of which were provided to the system developer as a basis for defining more detailed system requirements. According to the system developer, reconciling differences in these models contributed to the challenges in defining the requirements for NextGen.

<sup>&</sup>lt;sup>54</sup>Carnegie Mellon Software Engineering Institute, *Capability Maturity Model Integration for Development, Version 1.2* (Pittsburgh, Penn.: Aug. 2006). The Capability Maturity Model Integration for Development (CMMI), developed by the Software Engineering Institute of Carnegie Mellon University, defines key practices that are recognized hallmarks for successful organizations that, if effectively implemented, can greatly increase the chances of successfully developing and acquiring software and systems.

NFIP also provided the system developer with its operational manuals (e.g., flood insurance manuals, specific rating guidelines, and transaction reporting process manuals).<sup>55</sup> However, none of these manuals were current and complete, according to NFIP officials. For example, officials told us the manuals were constantly changing and did not fully reflect actual flood insurance underwriting practices. According to these officials, only the NFIP subject matter experts had sufficient knowledge about the practices actually being employed. However, the subject matter experts were not sufficiently involved in defining business requirements. As a result of this inadequate information, the system developer had to interpret the business requirements, leading to the development of more detailed requirements that were later found to be incomplete and inaccurate. Specifically, an assessment done by FEMA's CIO found that NextGen's business and functional requirements were not sufficiently complete or decipherable and were otherwise not captured in accordance with industry standards.<sup>56</sup>

Further, users were not sufficiently involved in defining requirements. Best practices for defining and managing system requirements also include eliciting user needs and involving users throughout the development process. Continued user involvement is particularly essential to a project for which high-level operational or business requirements have not been well defined, as was the case with NextGen. Recognizing the limitations in the business requirements, and consistent with practices associated with the spiral development methodology employed on NextGen, the system developer conducted a series of application prototyping and pilot testing activities between 2004 and 2006. According to officials from both FIMA and its contractor, these activities were intended to, among other things, discover new system requirements and clarify existing requirements by having groups of users interact with the system developers on early versions of the applications.

However, according to FIMA and the contractor, key subject matter experts did not participate in these prototyping and piloting efforts,

<sup>&</sup>lt;sup>55</sup>FEMA, National Flood Insurance Program Flood Insurance Manual (May 2006); National Flood Insurance Program Specific Rating Guidelines (May 2008); and National Flood Insurance Program Transaction Record Reporting and Processing (TRRP) Plan for the Write Your Own (WYO) Program (May 2006).

<sup>&</sup>lt;sup>56</sup>FEMA, *FEMA Enterprise Applications Development, Integration, and Sustainment, Requirements Validation Document of Findings*, NFIP-WO28 (Washington, D.C.: Jan. 18, 2010).

particularly in the area of NFIP's underwriting process. Instead, user participation was largely confined to the WYO insurance companies and flood insurance agents that participated in NFIP. To increase user participation, NFIP established the NextGen Executive Decision Group in January 2006. However, minutes of the group's meetings during 2006 and 2007 indicate that limited involvement of key NFIP internal users continued to hinder efforts to define NextGen system requirements. Moreover, the CIO assessment found that stakeholders were not adequately engaged in efforts to develop requirements. In particular, the assessment found that NFIP stakeholders' needs and concerns had not been adequately solicited and their approval of and commitment to requirements were not obtained.

NextGen Testing Was Not Effectively Managed Effective testing of a system like NextGen is essential to ensuring that the system functions as intended and meets mission needs and user expectations. As we have previously reported, an overarching test plan or strategy is critical for effective system testing.<sup>57</sup> Among other things, this overall test management plan should

- define the type and timing of the developmental and operational test events and activities;
- allow for detailed test planning and execution and ensure that the progress of the tests can be tracked and results reported and addressed;
- define the roles and responsibilities of the various groups that are responsible for the test events; and
- provide a high-level schedule for planned events and activities.<sup>58</sup>

Without such a plan, a risk exists that system testing will occur in an ad hoc and undisciplined fashion and that problems will not be discovered until late in the system's development cycle, when they are more difficult and costly to correct.

<sup>&</sup>lt;sup>57</sup>See GAO, Secure Border Initiative: DHS Needs to Address Significant Risks in Delivering Key Technology Investment, GAO-08-1086 (Washington, D.C.: Sept. 22, 2008).

<sup>&</sup>lt;sup>58</sup>Software Engineering Institute, *Capability Maturity Model Integration for Acquisition*, *version 1.2* (Pittsburgh, Pa.: November 2007); and Institute of Electrical and Electronics Engineers, *Standard 829-2008 Software and System Test Documentation* (New York, N.Y.: July 18, 2008).

	NFIP did not develop an overall NextGen test management plan or create a high-level schedule of the testing activities that would be performed. Instead, NFIP allowed its system development contractor to determine which tests to perform and how and when they would take place. According to the NextGen COTR, the types of testing events that were actually performed by the contractor were application prototyping and pilot tests between 2004 and 2006, followed by functional, regression, and system usability testing in 2006 and 2007. NextGen testing also included user testing conducted by NFIP in 2008 and 2009.
Individual Test Events Were Not Well Planned	Along with an overarching plan, specific, well-defined test plans are necessary if testing is to be effective. According to relevant guidance, test plans should specify each of the following key elements: <sup>59</sup>
	• <b>Roles and responsibilities:</b> Identifies individuals or groups that are to perform each aspect of the specific test event, such as test operators and witnesses, and the functions or activities they are to perform.
	• <b>Environment and infrastructure:</b> Identifies the physical facilities, hardware, software, support tools, test data, personnel, and anything else necessary to support the test event.
	• <b>Tested items and approach:</b> Identifies the object of testing (such as specific software or hardware attributes or interfaces) and describes the method used to ensure each feature of these objects is tested in sufficient detail.
	• <b>Traceability matrix:</b> Consists of a list of the requirements that are being tested and maps each requirement to its corresponding test cases, and vice versa.
	• <b>Risk and mitigation strategies:</b> Identifies issues that may adversely affect successful completion of testing, the potential impact of each issue, and contingency plans for mitigating or avoiding these issues.
	• <b>Testing schedule:</b> Specifies milestones, duration of testing tasks, and the period of use for each testing resource (e.g., facilities, tools, and staff).

<sup>&</sup>lt;sup>59</sup>Institute of Electrical and Electronics Engineers, Inc., *Standards for Software and System Test Documentation*, IEEE Std. 829-2008 (New York, N.Y.: July 18, 2008).

• **Quality assurance procedures:** Defines a process for ensuring the quality of testing, including steps for recording anomalies or defects that arise during testing and steps for making changes to approved procedures.

Test plans were not developed or used for prototype and pilot testing performed by the contractor between 2004 and 2006. According to the NextGen COTR, formal system testing was not considered necessary during prototyping and pilot efforts under the spiral system development approach.<sup>60</sup> While testing performed during such efforts is understandably less formal, the absence of any test plan is not consistent with relevant guidance. As we have previously reported, system pilots should be guided by a documented test plan that includes, for example, the type and source of data and the associated analysis necessary to determine the success of the pilot test.<sup>61</sup>

The contractor did develop test plans for the functional, regression, and usability testing of the NextGen applications that occurred in 2007 and 2008. Specifically, the contractor prepared, and the COTR approved, test plans for each test event for each application. However, none of these plans had all of the key elements of effective test planning. In particular, while most of the plans addressed roles and responsibilities, environment and infrastructure, test items and approach, and quality assurance, only two included a testing schedule, and none included a traceability matrix or the risks to be mitigated (see table 1).

<sup>&</sup>lt;sup>60</sup>The COTR reviews contractor performance regularly, ensures that contractual milestones are met and standards are being maintained, conducts regular inspections of contractor deliverables throughout the contract period, and ensures that all contract conditions and clauses are acted upon.

<sup>&</sup>lt;sup>61</sup>GAO, Tax Administration: IRS Needs to Strengthen Its Approach for Evaluating the SFRMI Data-Sharing Program, GAO-09-45 (Washington, D.C.: Nov. 7, 2008) and Homeland Security: US-VISIT Pilot Evaluations Provide Limited Understanding of Air Exit Options, GAO-10-860 (Washington, D.C.: Aug. 10, 2010).

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Key NextGen applications	Roles and responsibilities	Environment and infrastructure	Tested items and approach	Traceability matrix	Risk and mitigation strategies	Testing schedule	Quality assurance procedures
Flood Rating Engine Environment (FREE)	•	•	●	0	0	0	•
Flood Financial Management (F2M)	•	•	•	0	0	•	٠
Simple and Quick Access Net (SQAnet)	•	•	•	0	0	0	٠
Transaction Record Reporting Process (TRRP)	•	•	•	0	0	•	•
ezClaims	۲	۲	٠	0	0	0	•

Source: GAO analysis based on agency provided data.

O = not fulfilled

- **Roles and responsibilities:** All of the test plans addressed roles and responsibilities for each application. Specifically, they identified either individuals or groups of individuals, such as the test lead or subject matter experts that were to perform specific functions, such as reviewing test results, providing detailed test findings, and allocating testing resources.
- **Environment and infrastructure:** All of the test plans addressed environment and infrastructure. Specifically, they described the types of environments, such as a lab or the pilot program environment, as well as the hardware, software, and support tools needed for testing. Further, test data and personnel were also identified in each plan.
- **Tested Items and approach:** Four out of the five test plans identified the objects to be tested and described the methods used to ensure that each feature of these objects was tested in sufficient detail. For example, the FREE test plan included the test scripts, test cases, and sample test result log that would be used to test the application and record the results.

Note:  $\bullet$  = fulfilled

- **Traceability matrix:** None of the test plans listed the specific requirements that were being tested or mapped those requirements to the corresponding test cases. Rather, the test plans cited a single overarching requirement. For example, the SQANet test plan cited the requirement that NextGen provide NFIP reporting capabilities. However, this requirement was not broken down into subordinate requirements or mapped to corresponding test cases.
- **Risk and mitigation strategies:** None of the test plans identified issues that might adversely affect successful completion of testing. Although the TRRP test plan identified assumptions and constraints—for example that the subject matter experts would be available to provide documentation and rationale for identified discrepancies—the plan did not identify any assumptions or constraints as risks or provide plans for mitigating or avoiding their impacts.
- **Testing schedule:** Two of the five test plans (TRRP and F2M) included a detailed testing schedule. For example, both test plans cited the test name, tasks, timeframes, and durations (estimated number of hours). The other test plans referred to the NextGen project management plan and the project schedule for a testing schedule. However, neither of these project-level documents contained detailed information about these test events.
- **Quality assurance procedures:** All of the test plans included quality assurance procedures. Specifically, the plans described a process, including steps, for identifying and documenting issues or defects that arise during testing and for making changes to approved procedures. For example, the SQANet test plan defined a process for identifying and documenting test anomalies that included explaining each defect/issue found, capturing screenshots depicting the defect/issue, describing the testing environment or special testing method used to identify the defect/issue, and reviewing and resolving the defect/issue.

According to the NextGen COTR, risk mitigation strategies were not included in the test plans because they had already been addressed in a risk list that the contractor developed and maintained, and test schedules were not included because they were already in the NextGen project management plan. However, the contractor did not effectively implement the risk management activities, and as we have seen, the NextGen project management plan did not include a schedule that detailed specific test activities. The COTR also told us that traceability matrices were not included because DHS did not require them at the time the test plans were developed and executed. But according to industry best practices, traceability matrices are essential to helping ensure that the scope of test activities is adequate.

In addition, no user acceptance test plans were developed for the user testing that NFIP conducted in 2008. Instead, the program's branch chiefs selected eight NFIP subject matter experts to separately and individually test the system using system queries (test cases and procedures) of their own choosing based on their respective knowledge. In doing so, they were also told to compare their respective query results with results of similar queries of the legacy system. According to the NextGen COTR, user acceptance test plans were not developed because the tests performed by the subject matter experts were considered to be sufficiently specific and limited, focusing on finding the few "glitches" remaining after the initial deployment. As a result, user test plans were considered at the time to be unnecessary. Without well-defined test plans, however, the effectiveness of the testing performed could not be determined.

Effective test management includes not only capturing, prioritizing, tracking, and resolving any problems identified during testing, but also disclosing to stakeholders when and how problems are resolved. According to relevant guidance and best practices, this element of test management should be governed by a defined process and should ensure that those who are responsible for correcting the problems understand the full scope of system problems and the status of their resolution.<sup>62</sup>

The problems identified during NFIP's user acceptance testing of NextGen in 2008 were not governed by a defined and disciplined process for capturing, prioritizing, tracking, and resolving these problems. Specifically:

• The NextGen contractor was tasked with maintaining a list of problems identified. However, users participating in the testing told us they were not required to capture problems using a standard format and that the NFIP project office did not centrally merge and transmit the problems they identified to the contractor. Instead, these users said they separately and individually communicated the problems they each found either orally in meetings or via emails. However, NFIP officials

Problems Found During User Acceptance Testing Were Not Effectively Managed

<sup>&</sup>lt;sup>62</sup>Software Engineering Institute, *Capability Maturity Model Integration for Acquisition*, *version 1.2* (Pittsburgh, Pa.: November 2007); and Institute for Electrical and Electronics Engineers, *Standard 829-2008 Software and System Test Documentation* (New York, N.Y.: July 18, 2008).

also told us the NextGen contractor did not attend all of these meetings and the issues raised in these meetings were not always documented or provided to the contractor. As a result, NFIP and contractor officials agreed that the contractor's list of problems requiring resolution was incomplete.

- The NextGen project office did not maintain its own centralized list of problems requiring resolution. As a result, the project office did not know the universe of problems requiring resolution and could not track the status of each problem's resolution.
- Users participating in the system testing told us they were not told whether the problems they had identified were ever resolved or when and how resolution of those that were resolved took place. They said that this lack of communication regarding the resolution of system problems ultimately resulted in their rejection of the NextGen system.

Because of these weaknesses in how NFIP managed the resolution of problems identified during user acceptance testing, the NextGen project office was unable to demonstrate to the FEMA Acting Assistant Administrator that NextGen met NFIP mission needs and user requirements. This inability, in combination with the other acquisition management weaknesses, contributed to NextGen's cancellation.

FEMA Could Have More<br/>Effectively Managed NextGen<br/>RisksAccording to federal guidance, proactively managing project risks can<br/>increase the chances of delivering promised system capabilities and<br/>benefits on time and within budget.<sup>63</sup> We have reported that effective risk<br/>management, among other things, includes defining and implementing a<br/>process that identifies, analyzes, and mitigates risks and periodically<br/>examines the status of the identified risks and mitigation steps.<sup>64</sup> NFIP did<br/>not define and implement its own risk management process for its<br/>NextGen acquisition but instead delegated risk management to the<br/>NextGen system development contractor. NFIP officials said they did not<br/>conduct their own risk management activities because the NextGen<br/>project office was not staffed to do so. They said they expected the

<sup>&</sup>lt;sup>63</sup>Office of Management and Budget, *Capital Planning Guide: Supplement to Circular A-*11, part 7, (Washington D.C.: June 2006).

<sup>&</sup>lt;sup>64</sup>See GAO, *Homeland Security: U.S. Visitor and Immigrant Status Indicator Technology Program Planning and Execution Improvements Needed*, GAO-09-96 (Washington D.C.: Dec. 12, 2008).

contractor to manage all project risks and believed they did not need to duplicate these efforts.

The contractor did follow a process of identifying and analyzing risks and developing plans for implementing them that involved actions on the part of both NFIP and the contractor. However, not all of these plans were effectively implemented, in some instances because NFIP did not take the appropriate action, and in others because the contractor did not receive devoted resources to implement the action.

In total, the contractor's risk management efforts identified 72 risks over the life of the project, of which 47 (about 65 percent) remained open at the time the project ended. Of these 47 open risks, 36 (about 77 percent) related to the contractor's inability to gain access to NFIP staff or obtain information from NFIP staff or the legacy contractor. Specifically, 11 risks, the first of which was identified in July 2003, were associated with the lack of participation by NFIP subject matter experts in the prototyping and piloting of system applications. While FEMA established an executive-level decision group in 2006 to address this category of risks, risk related to lack of participation by subject matter experts continued to be identified and remained open at the time the project was cancelled.

Twenty-five risks were related to a lack of timely delivery of information from NFIP to the development contractor. For example, NFIP did not provide timely delivery of comments on deliverables and the legacy system that NextGen was to replace. According to the contractor's risk management documentation, these delays affected the development and pilot testing of key applications and thus the entire NextGen schedule. However, this documentation also shows that little or no action was taken by NFIP to address the risks.

The NextGen project also faced risks beyond those identified by the NextGen contractor. However, some of these risks were never captured and mitigated because they were outside the contractor's control. For example, documentation shows that NFIP officials were aware that representatives from both the NFIP NextGen office and the legacy contractor resisted NFIP's earlier attempt to move the NFIP system onto a new platform. However, the risk that this resistance posed to the new system was not included in the NextGen contractors' risk list, and steps to mitigate this risk were not taken. Later in the development of NextGen, this ongoing resistance was cited as having impaired NFIP's ability to develop the NextGen system. Specifically, the DHS Emergency Management IG reported that 14 NFIP staff in key positions relative to approving NextGen favored the legacy contractor and helped to promote a divisive atmosphere that limited NFIP's ability to develop NextGen.<sup>65</sup>

#### The NextGen Project Office Would Have Benefited from Additional Staff

As we have previously reported, having sufficient project office staff with the requisite capabilities is essential to effectively managing a system acquisition like NextGen.<sup>66</sup> Establishing such an office requires, among other things, an assessment of the core competencies and associated knowledge, skills, and abilities needed to perform key project management functions. It also requires an understanding of the knowledge, skills, and abilities of those assigned to the project, so that any gaps can be identified and a plan for filling those gaps can be developed and executed.

The NextGen project office was not adequately staffed, having only one full-time government employee, the COTR, assigned from 2006 to the project's cancellation. No project management staff were assigned to perform such critical system acquisition management functions as developing and managing system requirements, managing system testing, and managing risk. Instead, NFIP relied almost exclusively on the NextGen contractor to perform these and other project management functions.

According to a FEMA official, the NextGen project office requested additional staff in 2006, but the Acting Assistant Administrator for Mitigation denied the request because of resource constraints. Moreover, the request was for only one part-time person and was not based on a project management human capital assessment, which generally should include an analysis of needs and existing capabilities, the associated gap, and a plan for addressing identified gaps.

<sup>&</sup>lt;sup>65</sup>DHS, Improvement Needed in FEMA's Management of the National Flood Insurance Program's Information Technology Transition, OIG-10-76 (Washington, D.C.: Mar. 31, 2010).

<sup>&</sup>lt;sup>66</sup>See GAO, Information Technology: FBI Following a Number of Key Acquisition Practices on New Case Management System, but Improvements Still Needed, GAO-07-912 (Washington, D.C.: July 30, 2007) and Information Technology: Customs Has Made Progress on Automated Commercial Environment System, but It Faces Long-Standing Management Challenges and New Risks, GAO-06-580 (Washington, D.C.: May 31, 2006).

### NextGen Needed More Effective Executive Oversight

As we have previously reported, successfully acquiring IT systems requires the oversight and informed decision making of a senior-level investment review board.<sup>67</sup> Among other things, such a board is responsible for selecting among competing IT investments and overseeing those investments throughout their respective life cycles to help ensure that project cost, schedule, and performance commitments are met, benefit expectations are realized, risks are minimized, and project managers are held accountable for results. DHS has recognized the need for such a system investment oversight body. Specifically, DHS established a department-wide investment review board in 2003. In November 2008, DHS revised its acquisition review process to include updating this board, which became the ARB, as the department's highest review body and charging it with reviewing and approving all investments with life cycle costs above \$300 million. In addition, it established working groups and other boards, such as the Enterprise Architecture Board and the Program Review Board, to provide subject matter expertise to the ARB, and the Joint Requirements Council to validate the results of the strategic requirements planning process. Further, DHS required each of its component organizations, including FEMA, to establish and operate review boards to oversee their respective investments.68

However, neither FEMA nor DHS provided effective executive-level oversight of NextGen. Specifically, no FEMA review board or executive office, such as the CIO and Chief Financial Officer (CFO), ever held an oversight or milestone-decision review for NextGen. The DHS review board's last oversight of NextGen occurred in 2007. At that time, the ARB conditionally approved NextGen and delegated future oversight of the project to FEMA. However, FEMA did not have a review board in place at the time of the ARB's decision, having recently disbanded it because the demands of Hurricane Katrina made attendance at board meetings a low priority for members. The current FEMA CIO stated that OCIO and OCFO

<sup>&</sup>lt;sup>67</sup>See GAO, Homeland Security: Despite Progress, DHS Continues to Be Challenged in Managing Its Multi-Billion Dollar Annual Investment in Large-Scale Information Technology Systems, GAO-09-1002T (Washington, D.C.: Sept. 15, 2009); Homeland Security: Progress Continues, but Challenges Remain on Department's Management of Information Technology, GAO-06-598T (Washington, D.C.: Mar. 29, 2006); and Business Systems Modernization: Department of the Navy Needs to Establish Management Structure and Fully Define Policies and Procedures for Institutionally Managing Investments, GAO-08-53 (Washington, D.C.: Oct. 31, 2007).

<sup>&</sup>lt;sup>68</sup>DHS, *Acquisition Directive 102-01*, Interim Version 1.9 (Washington, D.C.: Nov. 7, 2008) and *Acquisition Instruction/Guidebook 102-01-01*, Interim Version 1.9 (Washington, D.C.: Nov. 7, 2008).

had not been more involved in NextGen because FIMA was not responsive to their requests for information about the project.

NFIP's Operating Environment and External Factors Complicate Administration of the Program, and FEMA Lacks Authority in Areas Critical to Its Long-term Financial Health	NFIP's operating environment differs from that of traditional insurers and limits FEMA's ability to keep the program financially sound. In particular, NFIP assumes and retains all of the risks for the policies it sells, is required to accept virtually all applicants for insurance, and cannot deny coverage for potentially high-risk properties. Moreover, additional external factors continue to complicate the administration of NFIP and affect its financial stability. These include lapses in NFIP's authorization, the role of state and local governments, fluctuations in premium income, and structural and organizational changes that have been made. Finally, as noted in past GAO reports, NFIP also faces external challenges that will continue to threaten the program's long-term financial health if they are not addressed. These include statutory requirements that NFIP charge subsidized premium rates for many properties, a lack of authority to include long-term erosion in the flood maps used to determine rates, and limitations on FEMA's ability to take action when some owners of repetitive loss properties refuse to mitigate or accept FEMA's mitigation offers. <sup>60</sup>
NFIP's Operations Differ from Those of Private Insurers	Any discussion of the challenges that FEMA faces in administering NFIP must take into account important differences between the government's flood insurance program and private insurers. For example, by design NFIP does not operate like a private insurer but must instead meet a public policy goal—to provide flood insurance in flood-prone areas to property owners who otherwise would not be able to obtain it. At the same time, it is expected to cover its claims losses and operating expenses with the premiums it collects, much like private insurers. In years when flooding has not been catastrophic, NFIP has generally managed to meet these competing goals. But in years of catastrophic flooding, such as 2005, it has not. During those years, it has exercised its authority to borrow from Treasury to pay claims and, as of April 2011, NFIP owed approximately \$17.8 billion to Treasury, mostly for the 2005 hurricane season. NFIP will likely not be able to meet its interest payments in all years, causing the debt to grow in certain years as FEMA may need to borrow to meet the

 $<sup>^{69}</sup>$  Generally, repetitive loss properties are those that have had two or more flood insurance claims payments of \$1,000 or more over a period of 10 years.

	interest payments in some years and potential future flood losses in others. This arrangement results in much of the financial risk of flooding being transferred to the U.S. Treasury and ultimately the taxpayer.
	Further, NFIP is also required to accept virtually all applications for insurance and cannot deny coverage or increase premium rates based on the frequency of losses. Private insurers, on the other hand, may reject applicants or increase rates if they believe the risk of loss is too high. As a result, NFIP is less able to offset the effects of adverse selection—the phenomenon that those who are most likely to purchase insurance are also the most likely to experience losses. Adverse selection may also lead to a concentration of policyholders in the riskiest areas. This problem is further compounded by the fact that those at greatest risk are required to purchase insurance from NFIP if they have a mortgage from a federally regulated or insured lender.
	Finally, by law, FEMA is prevented from raising rates on each flood zone by more than 10 percent each year. While most states regulate premium prices for private insurance companies for other lines of insurance, they generally do not set limits on premium rate increases, instead focusing on whether the projected losses and expenses justify them.
A Variety of External Factors Complicate FEMA's Administration of NFIP	As previously reported, FEMA also faces a number of external factors that are not necessarily within its control but that also must be considered when discussing the administration of the program. First, FEMA relies on private insurers to sell and service policies and adjust claims under the Write-Your-Own (WYO) Program, but multiple lapses in program authorization in recent years have strained NFIP's relationship with WYO insurers. In particular, NFIP's legal authorization has lapsed multiple times since it expired in 2008, leaving FEMA and WYO insurers unable to renew policies that expired during these lapses. Recent reauthorizations of the program have been for periods of time as short as 5 days. FIMA officials said these lapses in reauthorization created a significant burden for WYO insurers. For example, the insurers were forced to reallocate resources to communicate with agents and customers about how program lapses would affect them. In part for this reason, the largest WYO insurer left the

program, and NFIP is transitioning the 840,000 policies that the insurer had been selling and servicing to NFIP's Direct Servicing Agent.<sup>70</sup>

Second, like some other federal programs, FEMA relies on state and local governments and communities to implement parts of the program, which can limit the effectiveness of some of FEMA's efforts. For example, communities enforce building codes and other floodplain management regulations in an effort to reduce the flood risk that insured structures face, but some communities may not have sufficient resources to enforce existing regulations. FEMA also relies on communities to administer grant funds that are intended to mitigate high-risk properties.<sup>71</sup> However certain types of mitigation, such as relocation or demolition, might be met with resistance by communities that rely on those properties for tax revenues, such as coastal communities with significant development in areas prone to flooding. Finally, communities and individuals have sometimes mounted challenges to and resisted flood map revisions that place homes in higher-risk flood zones and would thus raise premium rates.

Third, the financial resources that NFIP uses to fund much of its operations have fluctuated in recent years. NFIP divides the premiums paid by policyholders into "mandatory" and "discretionary" dollars. Most premium dollars are considered mandatory and are used to pay flood claims and other budget items such as WYO fees and advertising. The remaining premium dollars are allocated to discretionary uses and are used to fund NFIP operations.<sup>72</sup> FIMA staff have noted that lower-than-expected policy fee income in recent years has forced them to cut back on certain functions, including contract and WYO oversight, field office management, and community outreach. For example, FEMA officials said that in 2009 FEMA based NFIP's budget on expectations that the program

<sup>&</sup>lt;sup>70</sup>NFIP's Direct Servicing Agent program collects premiums, underwrites and produces policies, and settles claims for policies that insurance agents obtain for property owners directly from NFIP rather than through a WYO insurer.

<sup>&</sup>lt;sup>71</sup>FEMA has three separate mitigation grant programs, each with different types of requirements, purposes, and appropriations: the Flood Mitigation Assistance Program (FMA), the Repetitive Flood Claims Program (RFC), and the Severe Repetitive Loss Program (SRL). Moreover, the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation Program (PDM) are two additional hazard mitigation programs that are not specific to flooding.

<sup>&</sup>lt;sup>72</sup>Mandatory spending refers to outlays resulting from budget authority that is provided in laws other than appropriation acts, while discretionary spending is provided in and controlled by appropriation acts.

would collect \$156 million in policy fees, \$107 million of which the President's budget required to be spent on mapping. By the end of the fiscal year, NFIP had collected only \$144 million in policy fees, leaving NFIP with only \$37 million, instead of the expected \$49 million, to pay salaries and other operating expenses. NFIP received approval from Congress to redirect \$4.9 million in mandatory funds from the advertising budget into the discretionary budget to pay for these expenses, and it compensated for the remaining \$7.1 million shortfall with spending cuts, largely from staff attrition and a hiring freeze.

Finally, both FEMA and FIMA have faced many significant changes to their organizational structures and responsibilities since 2001, creating challenges in implementing consistent and effective business processes. FEMA underwent several organizational changes in 2001 and 2002, but the most significant change occurred in 2003, when FEMA transitioned from an independent agency to a component of the newly created DHS. At that time, FEMA became part of DHS's Emergency Preparedness and Response Directorate, and some of its functions were moved to other organizations within DHS. In addition, functions that had formerly been part of other agencies were incorporated into the new Emergency Preparedness and Response organization. From 2003 through 2005, over \$1.3 billion in new or significantly expanded programs came into FEMA, while programs with funding of nearly \$1.5 billion were transferred out. Although these changes nearly balance in dollar terms and the number of employees remained the same, they created considerable disruption to FEMA's operations and uncertainty about the availability of resources. After the 2005 hurricanes and the widespread perception that FEMA had failed to effectively meet its mission, the agency faced changes that created further uncertainty and affected employee morale. In 2007, PKEMRA expanded FEMA's mission by integrating preparedness with protection, recovery, response, and mitigation to address all hazards. FEMA was reorganized again in 2009 at the direction of a new FEMA Administrator. At the same time, FIMA has also faced considerable organizational changes—both through the overall FEMA reorganizations and additional reorganizations that occurred with successive FIMA administrators, most significantly in 2006.73 Policies and processes are often specific to the organizational and oversight structures that are in place when they are created, and when those structures change, the policies and processes may no longer be relevant or complete.

<sup>&</sup>lt;sup>73</sup>As of February 2011, FIMA did not have an appointed administrator. FIMA has had an acting administrator since April 2009.

FEMA Lacks Authority in Areas Critical to Its Longterm Financial Health

FEMA Lacks Authority to Charge Full-Risk Rates on Many Properties and Is under Pressure to Allow Grandfathered Rates on Others

As we have pointed out in previous reports, FEMA is required by law to charge many policyholders less than full-risk rates, otherwise known as subsidized rates.<sup>74</sup> These rates are intended to encourage property owners to purchase flood insurance, and today nearly one out of four NFIP policies are based on a subsidized rate. These rates allow policyholders with structures that were built before floodplain management regulations were established in their communities to pay premiums that represent about 40 percent to 45 percent of the actual risk premium. Moreover, FEMA estimates that properties covered by policies with subsidized rates experience as much as five times more flood damage than compliant new structures that are charged full-risk rates. One difficulty in analyzing the effect of subsidized premium rates is that, while they affect the overall financial stability of NFIP and can potentially increase borrowing from the Treasury, the subsidy is not recognized in FEMA's budget. As we have reported in the past, the cost of federal insurance programs is often not accurately reflected in agencies' budgets.<sup>75</sup> As a result, Congress may not have adequate information about the potential claims on the federal budget when it establishes or reviews federal insurance programs. This lack of information may be especially problematic in the case of NFIP because of the continued growth in the subsidy. As we have pointed out, the number of policies receiving subsidized rates has grown steadily in recent years, and without changes to the program, will likely continue to grow, increasing the potential for future NFIP operating deficits.<sup>76</sup>

In addition, NFIP may "grandfather" properties when new flood maps place them in higher-risk zones. Unlike private insurers that charge riskbased rates, FEMA made a policy decision to allow certain properties remapped into riskier flood zones to keep their previous lower rates. While FEMA is not statutorily required to grandfather these policies,

<sup>76</sup>See GAO-09-20.

<sup>&</sup>lt;sup>74</sup>See GAO, Flood Insurance: Options for Addressing the Financial Impact of Subsidized Premium Rates on the National Flood Insurance Program, GAO-09-20 (Washington, D.C.: Nov. 14, 2008).

<sup>&</sup>lt;sup>75</sup>See GAO, Budget Issues: Budgeting for Federal Insurance, GAO/AIMD-97-16 (Washington, D.C.: Sept. 30, 1997).

FEMA officials told us that they made the decision because of resistance to rate increases and based on considerations of equity, ease of administration, and goals of promoting floodplain management. However, homeowners who are remapped into high-risk areas and do not currently have flood insurance may be required to purchase it at the full-risk rate. Further, FEMA recently introduced a new rating option called the Preferred Risk Policy (PRP) Eligibility Extension that is, in effect, a temporary grandfathering of premium rates.<sup>77</sup> While PRPs traditionally would have to be converted to more expensive standard-rated policies when they were renewed, FEMA extended PRP eligibility to 2 years after a new flood map's effective date or January 1, 2011, whichever is later. FEMA made the decision to offer these lower rates in response to significant community resistance to remapping and the resulting increased rates as well as concern expressed by Congress. As we have reported, to the extent that NFIP charges less than full-risk rates on many properties, it adds to the risk that the program will need to borrow from Treasury to pay claims.

While FEMA is in the process of updating the flood maps used to set premium rates for NFIP, it is not authorized to account for long-term erosion in developing these maps.<sup>78</sup> The purpose of these maps is to accurately estimate the likelihood of flooding in specific areas given certain characteristics including elevation and topography. Despite these modernization efforts, some maps can quickly become inaccurate because of changes from long-term erosion, particularly in coastal areas. However, FEMA is not authorized to map for these changes—that is, it is not allowed to take into account situations in which long-term erosion might increase the risk of flooding in certain areas. Not accurately reflecting the actual risk of flooding increases the likelihood that even full-risk premiums will not cover future losses and adds to concerns about NFIP's financial stability.

## FEMA Is Not Authorized to Account for Long-term Erosion in Developing Flood Maps

<sup>&</sup>lt;sup>77</sup>NFIP's PRP offers low-cost flood insurance to owners and tenants of residential and nonresidential buildings located in moderate- to low-risk areas as long as the property has not, within any 10-year period, incurred two or more flood insurance claim payments or disaster relief payments (including loans and grants), each more than \$1,000.

<sup>&</sup>lt;sup>78</sup>The National Flood Insurance Act of 1968, as amended, authorizes FEMA to carry out NFIP to enable persons to buy insurance against losses arising from flood. The statute defines flood as including sudden, flood-event-triggered collapses or subsidences of land along the shore of a body of water, but the statute's definition of flood does not include the gradual, long-term erosion that may endanger coastal communities. *See* 42 U.S.C. §§ 4001, 4002 and 4121(c).

# FEMA Is Limited in Its Ability to Encourage Property Owners to Undertake Mitigation Efforts

In reforming NFIP in 2004, Congress noted that repetitive loss properties—generally, those that FEMA defines as having had two or more flood insurance claims payments of \$1,000 or more over 10 yearsconstituted a significant drain on NFIP resources.<sup>79</sup> While Congress has made efforts to address this issue through mitigation activities, repetitive loss properties continue to be a drain on NFIP. Many of these properties are part of the subsidized property inventory, and thus receive subsidized rates, further contributing to NFIP's financial instability. This situation exposes the federal government and ultimately taxpayers to greater risks and is not consistent with several of the public policy goals (e.g., limiting exposure to the federal government and the taxpayer) that we have previously identified for disaster programs.<sup>80</sup> As previously reported, FEMA will offer premium discounts for efforts to mitigate high-risk structures including raising the elevation of, relocating, or demolishing a property, but these efforts are for the most part voluntary.<sup>81</sup> FEMA does have some authority to raise premium rates for property owners who refuse mitigation offers made by local authorities, such as an offer to elevate the property, in connection with the severe repetitive loss pilot program. Specifically, if a property owner refuses a mitigation offer, FEMA can increase premiums to up to 150 percent of their current amount and by a similar amount later on if the property owner is paid a claim of greater than \$1,500. However, FEMA is prohibited from charging more than the current full rate and as a result cannot increase premiums on property owners are paying the full rate but who refuse a mitigation offer. In addition, FEMA is not allowed to discontinue coverage for those who refuse mitigation offers. As a result, FEMA has some limitations on its ability to compel owners of properties with repetitive losses to undertake flood mitigation efforts. Further, while Congress has made efforts to reduce the number of repetitive loss properties, their number has grown,

<sup>81</sup>See GAO-09-20.

<sup>&</sup>lt;sup>79</sup>Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, Pub. L. No. 108-264, 118 Stat. 712 (2004). The act amended the existing definition of the term "repetitive loss structure" to the current one: a structure covered by a contract for flood insurance that has incurred flood-related damage on two occasions, in which the cost of repair, on the average, equaled or exceeded 25 percent of the value of the structure at the time of each such flood event; and at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage, which can help property owners pay for the cost of mitigation measures for flood-damaged properties. 42 U.S.C. § 4121(a).

<sup>&</sup>lt;sup>80</sup>See GAO, National Disasters: Public Policy Options for Changing the Federal Role in Natural Catastrophe Insurance, GAO-08-7 (Washington, D.C.: Nov. 26, 2007).

making them an ongoing challenge to NFIP's financial stability. Specifically, these properties account for about 1 percent of all policies but are estimated to account for up to 30 percent of all NFIP losses. Unless FEMA is able to effectively encourage owners of severe repetitive loss properties to undertake mitigation efforts, the potential losses associated with such properties continues to threaten the financial stability of the NFIP.

Recognizing that NFIP faces a variety of structural challenges that need to be reformed, FIMA began a three-phase effort to develop recommendations to reform the program by addressing some of the program's external challenges. The process began with a listening session in November 2009 to capture concerns and recommendations from about 200 stakeholder participants and to better understand the need for NFIP reform. The second phase included adopting a policy analysis framework, analyzing existing stakeholder input, developing and agreeing on guiding principles to direct the NFIP reform effort, and creating evaluation criteria to be used in scoring each of the proposed policy alternatives. The final phase, which began in June 2010 and includes evaluating the policy alternatives, will result in a reform proposal package that FIMA will submit to FEMA leadership. To inform this phase, FIMA conducted two additional stakeholder meetings in December 2010. This process may provide some helpful ideas to address some of the major challenges facing FEMA in its administration of NFIP. But as we have noted in earlier reports, comprehensive legislative reform will be needed to stabilize its financial condition.

# Conclusions

While FEMA has begun to take steps to address its issues, it faces significant management challenges in areas that affect NFIP, including strategic planning, human capital planning, collaboration among offices, records management, financial management, acquisition management, and business processes. Effectively addressing these challenges would require program improvements at all levels within FIMA, FEMA, and DHS and would not only help improve the administration of NFIP but also help to more effectively deal with financial and operational challenges that NFIP faces—challenges over which FEMA often has limited direct control. While FEMA has not yet addressed many of these issues, in part because of the demands of its key mission of responding to emergencies, it is beginning to take certain steps to address its challenges. While some efforts are under way, FEMA has much work ahead of it in beginning to plan and execute the day-to-day activities necessary to effectively manage

both the agency and NFIP and to ensure effective collaboration between program and support offices. As we have seen, for example:

- FEMA has not provided FIMA with strategic direction and guidance for administering NFIP, and FIMA has not developed a comprehensive strategy with goals and objectives for the program. GPRA states that strategic plans should include such guidance and strategies for major programs like NFIP. Without this direction, NFIP lacks a strategic focus, and the agency is limited in its ability to develop effective performance measures to measure NFIP's progress. Without a robust set of performance measures and an established process for management to regularly review them, the agency cannot monitor and hold accountable management and staff involved in the program.
- FEMA lacks a strategic human capital plan (as required by PKEMRA) that addresses the critical competencies required for its workforce. Such a plan is critical for FEMA because of its heavy reliance on contractors. Without such a plan, FEMA is limited in its ability to assess its staffing and workforce needs, manage turnover, fill vacancies, and oversee its contractor workforce.
- FEMA lacks a plan to ensure that agency operations are maintained when federal disasters are declared and staff are deployed to respond. Without such a plan, FEMA faces the risk that some critical day-to-day functions may not be performed while staff are deployed, limiting the agency's ability to provide the necessary support for disaster relief missions.
- FIMA relies on Mission Support for a variety of mission-critical functions, including IT, acquisition, and financial management, but FIMA and Mission Support have faced challenges in collaborating with one another. For example, FIMA and OCFO have had limited communication regarding FIMA's budget formulation needs. Without better collaboration and communication between FIMA and Mission Support's various offices, FEMA will be unable to fully ensure that NFIP's IT, acquisition, and financial and budgetary needs are being met.

Further, FEMA still lacks comprehensive systems, policies, and processes that would help ensure sound records, financial, and acquisition management as they relate to NFIP. In particular:

• FEMA has no centralized electronic document management system that would allow its various offices to easily access and store

documents. As a result, the offices have faced problems with lost or destroyed documents, decreased productivity, and duplicated effort. While there is broad consensus for the need for a centralized electronic document management system, FEMA is currently awaiting an overall DHS decision on a system to be used for this process. However, until such a system is provided, FEMA will continue to face document management challenges that impede program effectiveness.

- In previous audits, KPMG found weaknesses within FEMA's management of unliquidated obligations. The agency has issued an interim directive for addressing the issue, but FIMA staff said they did not know the amount of these obligations and the extent to which they have been inactive. Until FEMA reviews FIMA's unliquidated obligations, FIMA may be foregoing funds that could otherwise be returned and used for other program needs.
- Recognizing a number of weaknesses in its oversight and management of acquisitions, FEMA has taken steps to improve these functions, including drafting an acquisition directive and a handbook explaining how to implement it. However, most of these actions have either been recently implemented or are still under development. While they are the kinds of steps that need to be taken, the extent to which they will ensure effective oversight of FEMA's acquisition activities remains to be seen.
- FEMA Mission Support staff told us that in early 2009 they began a business process improvement effort that involved mapping current processes, analyzing them, and determining how they could be improved. Until this mapping process is complete and related internal control processes are developed, a high risk exists that certain functions will be inconsistently or incompletely carried out.

In addition, FEMA has spent about 7 years and \$40 million in its latest attempt to modernize NFIP's insurance policy and claims management system. FEMA ultimately canceled the effort in November 2009 because it failed to meet user expectations, forcing the agency to continue relying on an outdated system that is neither effective nor efficient. Any further attempts to modernize the program's existing system must recognize the root causes of NextGen's failure, which include:

• FEMA's and DHS's failure to provide sufficient oversight of the project and to allow these acquisition weaknesses to go unchecked for years. Without sufficient management oversight, FEMA will be limited in its ability to ensure that future modernization attempts are completed efficiently and effectively.

• Weaknesses in several key system acquisition areas that led to NextGen's cancellation, including poorly defined and managed requirements, poorly planned and executed system testing, insufficiently mitigated program risks, and an inadequately staffed program office. Unless FEMA learns from these mistakes, future modernization attempts could face the same fate.

In addition to management challenges, FEMA still faces challenges related to its financial operations and rate structure. The hurricanes of 2005 required a massive response from FEMA as it worked to help thousands of individuals recover from sometimes devastating damage to their property. The scope of the damages and total claims paid, which were unparalleled in NFIP's history, highlighted challenges with the program's financial structure. These challenges, along with the debt incurred by NFIP as a result of the 2005 hurricanes, remain today.

As we have indicated in previous reports, FEMA can take some actions to improve NFIP's financial stability, such as ensuring that NFIP's full-risk premium rates accurately reflect the risk of loss and ensuring that WYO insurers justify and document their claims for payment. However, fully addressing other challenges to the long-term financial stability of the program will require congressional action. For example, as we have pointed out, congressional action to allow NFIP to charge full-risk premium rates to all property owners would decrease the potential for future NFIP operating losses. Authorizing the inclusion of long-term erosion in future rate maps and providing FEMA with the authority to require owners of repetitive loss properties to mitigate or impose penalties for not doing so would also reduce the risks of future NFIP losses. We recognize that these potential changes involve tradeoffs. Increasing premium rates and requiring homeowners to mitigate flood-prone properties could, for example, reduce participation and create hardship for some property owners. Nevertheless, until these and related issues are resolved, the program will continue to present a significant financial risk to the government and taxpayers.

Recommendations for Executive Action	To improve strategic planning, performance management, and program oversight within and related to NFIP, we recommend that the Secretary of DHS direct the FEMA Administrator to take the following four actions:
	• Provide strategic direction and guidance to the process for developing a comprehensive strategy for FIMA operations; establish a firm timeframe for and complete the development of this strategy; and take steps to ensure that this strategy has appropriate performance goals and measures to track NFIP's progress.
	• Develop a comprehensive workforce plan according to PKEMRA that identifies agency staffing and skills requirements, addresses turnover and staff vacancies, and analyzes FEMA's use of contractors.
	• Direct the FEMA Administrator to develop guidance for continuing operations when staff are deployed to respond to federal disasters and direct FIMA Acting Assistant Administrator to develop such a plan.
	• Direct the FIMA Acting Assistant Administrator and the FEMA Mission Support Associate Administrator to develop protocols to encourage and monitor collaboration between FIMA and relevant support offices, including those for information technology, acquisition management, and financial management.
	To improve FEMA's policies, procedures, and systems for achieving NFIP's program goals, we recommend that the Secretary of DHS direct the FEMA Administrator to take the following four actions:
	• While waiting for DHS to implement an agencywide electronic document management system, consider the costs and benefits of implementing an interim system for FEMA and updating its document management policies and procedures.
	Ensure that FEMA regularly reviews unliquidated obligations within NFIP-related funds.
	• Establish timelines for and complete the development and implementation of FEMA's revised acquisition process, in line with the DHS Acquisition Directive 102-01, including a rollout process with staff training and a mechanism to better ensure that all acquisitions undergo the necessary reviews.
	• Ensure that FEMA Mission Support's business process improvement efforts are expeditiously completed.

	To improve the usefulness and reliability of NFIP's flood insurance policy and claims processing system, we recommend that the Secretary of DHS take the following two actions:				
	• Direct the DHS Deputy Secretary, as the Chair of DHS's ARB, to provide regular oversight of FEMA's next attempt to modernize this system.				
	• Direct the FEMA Administrator to ensure that FEMA's CIO applies lessons learned from the NextGen experience to the next modernization attempt. At a minimum, this effort should ensure that (1) all levels of system requirements are complete and clear and that key stakeholders are adequately involved in requirements development and management, (2) key test events are effectively planned and executed and problems identified during testing effectively managed, (3) project risks are proactively identified and mitigated, and (4) project office staffing needs are properly assessed and met.				
Matters for Congressional Consideration	As Congress considers NFIP reforms and reauthorization, it should consider ways to better ensure the long-term financial stability of the program, such as 1) allowing NFIP to charge full-risk premium rates to all property owners and providing assistance to some categories of owners to pay those premiums; 2) authorizing NFIP to account for long-term flood erosion in its flood maps; and 3) clarifying and expanding FEMA's ability to increase premiums or discontinue coverage for owners of repetitive loss properties who do not mitigate their properties or refuse FEMA's mitigation offers.				
Agency Comments and Our Evaluation	We provided the Secretary of Homeland Security with a draft of this report for review and comment. DHS provided written comments that we summarize below. DHS's letter is reproduced in Appendix II. FEMA also provided us with technical comments, which we have incorporated as appropriate.				
	DHS concurred with all of our 10 recommendations and identified actions taken or plans made to implement them. Specifically, DHS agreed with our recommendations to:				
	• Provide strategic direction and guidance to the process for developing a comprehensive strategy for FIMA operations; establish a firm timeframe for and complete the development of this strategy; and take				

steps to ensure that this strategy has appropriate performance goals and measures to track NFIP's progress. DHS stated that FEMA had recently released its strategic plan for fiscal years 2011-2014 and had begun requiring its directorates and offices to submit annual operating plans with goals, measures to track the goals, and links to FEMA's plan. However, until such a plan and accompanying performance measures are complete and fully implemented, whether such a plan will provide the necessary strategic framework for managing NFIP remains to be seen.

- Develop a comprehensive workforce plan according to PKEMRA. DHS noted that FEMA had obtained a contractor to conduct a workforce assessment and had completed Phase I of the process. However, when the entire workforce plan will be completed given the challenges FEMA faces in identifying the number and categories of FEMA staff positions and contractors as cited in the Phase I study is unclear.<sup>82</sup> In addition, as we cited in the report, the Strategic Human Capital Plan that FEMA developed in response to PKEMRA did not fulfill the requirements of the mandate. These requirements include:
  - specific goals and objectives for recruiting and retaining employees, such as recruitment and retention bonuses;
  - specific strategies and program objectives to develop, train, deploy, compensate, motivate, and retain employees;
  - specific strategies for recruiting staff with experience serving in multiple state agencies responsible for emergency management; and
  - specific strategies to develop, train, and rapidly deploy a Surge Capacity Force.
- Develop a plan for continuing NFIP operations when staff are deployed to respond to federal disasters. DHS stated that it agreed to provide guidance to FEMA and its components for developing such a plan, however it does not identify time frames for providing such guidance.

<sup>&</sup>lt;sup>82</sup>Homeland Security Studies and Analysis Institute (HSSAI), *FEMA Workforce Baseline Assessment* (Arlington, Va.: Mar. 31, 2010).

- Develop protocols for collaboration between program and support offices. DHS noted that Mission Support had begun some such efforts, including holding listening sessions and responding to problems that surface.
- Consider the costs and benefits of implementing an interim electronic records management system while awaiting an overall DHS system and update its document management policies and procedures to ensure records are being adequately managed. DHS indicated that they have been providing interim policies and guidance to program offices; however, the policies and procedures they provided us during our review had not been updated.
- Have FEMA regularly review unliquidated obligations within NFIPrelated funds. DHS stated that FEMA had published an interim directive in 2009 that applied to open FEMA obligations including those within FIMA. While this directive provides useful criteria, our recommendation is that FEMA follow this guidance and better ensure that regular reviews are completed.
- Establish timelines for and complete the development of FEMA's revised acquisition process. DHS listed a number of ongoing efforts in this area including training, certification, and recruitment, among others. While we are encouraged by the steps taken, establishing timelines and completing these efforts are critical to establishing a well functioning contract and acquisition management program.
- Ensure that Mission Support's business process reengineering plans are expeditiously completed. DHS stated that Mission Support had begun the process of incorporating lessons learned into its day-today operations. However, we recommend that the plans be fully and expeditiously implemented, given their importance to helping FEMA's improve its overall procedures.

Finally, DHS concurred with our last two recommendations for improving NFIP's flood insurance policy and claims processing system. Specifically, DHS stated it was preparing to elevate NFIP's status and ensure that the program was designated for regular oversight by DHS's ARB. DHS restated its commitment to ensuring that FEMA applies lessons learned from the NextGen experience to its efforts to replace its current system.

We are providing copies to the Chairman and Ranking Member, Senate Committee on Banking, Housing and Urban Affairs; the Chairman and Ranking Member, House Committee on Financial Services; and other interested committees. We are also sending a copy of this report to the Secretary of Homeland Security and other interested parties. In addition, the report will available at no charge on our Web site at http://www.gao.gov.

If you or your staff have any questions regarding this report, please contact me at (202) 512-8678 or williamso@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

ie Williams Brown

Orice Williams Brown Managing Director, Financial Markets and Community Investment

# Appendix I: Objective, Scope, and Methodology

Significant management challenges affect the Federal Emergency Management Agency's (FEMA) ability to administer the National Flood Insurance Program (NFIP). GAO undertook this current review to identify root causes of these deficiencies and to clarify how to address them. Our objectives were to (1) analyze the extent to which FEMA's key management practices—including strategic planning, human capital planning, records management, financial management, acquisition management, and intra-agency collaboration—affect the agency's ability to administer NFIP; (2) identify lessons to be learned from the Next Generation Flood Insurance Management System (NextGen) program's cancellation, including to what extent key acquisition management processes were followed on NextGen; and (3) describe factors that are relevant to NFIP operations and analyze limitations on FEMA's authority that could affect its financial stability.

To determine the extent to which FEMA's management practices affected its ability to meet its program goals as well as congressional goals for NFIP, we collected available data from FEMA and conducted over 80 interviews with representatives from FEMA's Federal Insurance and Mitigation Administration (FIMA), Office of Policy and Programs Analysis (OPPA), and the Mission Support Bureau's offices for administration, finance, human capital, information, and procurement. We also interviewed representatives of the Department of Homeland Security's (DHS) Office of the Inspector General (OIG), the National Association of Public Administration (NAPA), and KPMG LLP. In addition, we analyzed FEMA planning documents, policies, directives, materials, and data related to key aspects of program management: strategic planning, human capital planning, records management, acquisition management, and financial management. Due to the nature of the audit work in these areas, we conducted a data reliability assessment in the areas of human capital and financial management. Both were found to be sufficiently reliable for the purposes of our report. Further, we reviewed relevant legislation, internal control standards, best practices, and external studies of FEMA's management challenges. More specifically:

• **Strategic planning:** To assess FEMA's strategic plans and performance measures, we obtained and analyzed materials and documents including FEMA's 2008 strategic plan and FIMA performance measures. We assessed these documents against our past reports on the Government Performance and Results Act of 1993 (GPRA) and the Standards for Internal Controls in the Federal

Government.<sup>1</sup> To further understand the strategic planning process and assessment of performance measures, we met with key FIMA and OPPA officials to discuss FEMA's and FIMA's past and future strategic planning efforts.

- Human capital: To assess FEMA's workforce planning efforts, we reviewed the 2008-2012 Strategic Human Capital Plan and compared it with the requirements in the Post-Katrina Emergency Management Reform Act of 2006. We also evaluated FEMA's efforts based on guidelines on workforce planning from the National Aeronautics and Space Administration, our past reports on key principles for workforce planning, and written responses provided by FEMA's human capital office to questions we submitted. In addition, we analyzed the Consolidated Appropriations Act of 2010 to assess its contractor tracking requirements for December 2010. To determine turnover in key positions, we interviewed key FEMA staff regarding turnover in their departments and obtained and analyzed attrition data from the human capital office. To assess challenges in hiring, we reviewed documentation and interviewed human capital and other FEMA staff. In order to understand the information technology (IT) issues that the human capital office faces, we interviewed key human capital staff and analyzed reports and documents by the DHS OIG and NAPA. We also reviewed standards for continuity of operations plans and past GAO reports on business continuity plans.
- **Collaboration:** To assess FEMA's efforts to encourage coordination between FIMA and the Mission Support offices, we compared the practices of these two offices to key practices that we identified in previous work for enhancing and sustaining a collaborative relationship among federal agencies.<sup>2</sup>
- **Records management:** To assess FEMA's records management efforts, we reviewed the National Archives and Records Administration standards, the Federal Records Act, the Paperwork Reduction Act, and the Standards for Internal Controls in the Federal Government. We reviewed FEMA and FIMA records management procedural

<sup>&</sup>lt;sup>1</sup>See GAO, Agencies' Strategic Plans Under GPRA: Key Questions to Facilitate Congressional Review, GAO/GGD-10.1.16 (Washington, D.C.: May 1997) and Standards for Internal Control in the Federal Government, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

<sup>&</sup>lt;sup>2</sup>See GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005).

documents, training materials, FEMA's previous records management policy, DHS's records management policy, and DHS OIG reports. We met with the Office of the Chief Administrative Officer, staff from the Records Management Division, and other relevant FEMA staff to further understand records management efforts.

- **Financial management:** To assess FEMA's financial management processes for NFIP, we reviewed policy documents, training materials, reference materials, spreadsheets used in budget formulation, data information on past audits, and data on unliquidated obligations and compared them to findings in past KPMG LLC audits, DHS OIG reports, and our past reports on FEMA's financial management. We interviewed relevant staff from FIMA's and FEMA's financial offices to further understand financial management processes and efforts.
- Acquisition: In order to assess FEMA's acquisition efforts, we obtained and analyzed FEMA's guidance for acquisition management and contractor oversight and compared them to the Federal Acquisition Regulation and to findings in the DHS OIG reports and our previous reports related to FEMA's acquisition efforts. We interviewed FEMA's Chief Procurement Officer and other relevant FEMA staff to assess acquisition efforts. We also attended contractor oversight meetings to better understand day-to-day contractor oversight activities.

In addition, we worked at a FEMA audit site in its Arlington, Virginia, offices from January to April 2010. During that time, we held meetings with FIMA staff, obtained relevant documents, and attended day-to-day operational and contractor oversight review sessions. In order to gather additional information about NFIP reform efforts, we attended the NFIP Listening Session in November 2009 and the NFIP Reform Public Meeting in December 2010, both of which were held in Washington, D.C.

To determine the extent to which the NextGen program's acquisition was effectively managed and overseen, we focused on the following acquisition management areas: (1) requirements development and management, (2) test management, (3) risk management, (4) human capital planning, and (5) program oversight. In doing so, we analyzed a range of program documentation, such as requirements documentation, test plans and reports, risk documentation, program management plan, and related documentation, and interviewed relevant program and contractor officials.

- To determine the extent to which the program had effectively implemented requirements development and management, we reviewed relevant program documentation, such as the concept of operations document, NFIP operational manuals, requirements and design documents on NextGen applications, joint working group recommendation reports, change request forms, and the program management plan, and evaluated them against relevant guidance. Moreover, we reviewed briefing slides and meeting minutes from the NextGen Executive Decision Group. In addition, we interviewed program and development contractor officials to discuss the requirements development and management process.
- To determine the extent to which the program effectively implemented test management activities we reviewed test plans for functional, regression, and usability testing and NextGen application summary test reports and compared them with best practices to determine whether test activities had been adequately documented and implemented. In addition, we interviewed program and contractor officials to discuss the test management process.
- To determine the extent to which NextGen risks were effectively managed, we reviewed the most current NextGen risk management plan, risk lists, and monthly program status report. We also interviewed program and development contractor officials to discuss the risk management process.
- To evaluate whether FEMA was adequately providing for the NextGen program office's human capital needs, we compared the program's efforts against relevant guidance. We also interviewed key officials to discuss workforce analysis and human capital planning efforts.
- To determine the level of oversight given over NextGen we reviewed DHS's acquisition directive and guidebook and met with officials responsible for NextGen executive-level oversight to determine if oversight was effectively provided.

To identify external factors that affected NFIP's ability to carry out its mission, we reviewed previous GAO reports that analyzed various aspects of NFIP's policies, practices, and organizational structure, identifying factors that affected NFIP's operations but over which NFIP did not have control. For example, we reviewed our reports on the oversight of the Write-Your-Own program, the financial impact of subsidized premium rates, and the rate-setting process for flood insurance premiums. To determine whether and to what extent the factors identified in these reports were still affecting NFIP's operations and to identify any additional factors, we interviewed FEMA representatives and reviewed relevant testimony of officials from FEMA and several interested associations before Congress.

We conducted this performance audit from July 2009 to June 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.
## Appendix II: Comments from the Department of Homeland Security









uniformly to all FEMA program offices, including FIMA (FEMA's Federal Insurance and Mitigation Administration).
<ul> <li>Continue to ensure that FEMA's revised acquisition process is in line with DHS</li> </ul>
Acquisition Directive 102-01. FEMA continues to make a major investment in
improving its capability and capacity to manage contracts and oversee acquisition programs. FEMA's accomplishments in the acquisition process include:
<ul> <li>Established and began staffing a 26-person Disaster Assistance Response Team to</li> </ul>
provide fully qualified acquisition personnel to major disaster sites to provide
consistent and Federal Acquisition and Regulation (FAR)-compliant post-award
contract administration on major response and recovery contracts (e.g., IA TAC, PA
<ul> <li>TAC) that pose high performance risks</li> <li>Established a Regional Branch to provide a functional reporting chain for all regional</li> </ul>
contract specialists to ensure the integrity of acquisition actions, provide standardized
contract awards and administration, and ensure all acquisition personnel are
supervised by progressive levels of experienced Contract Specialists.
<ul> <li>Developed a FEMA Qualification System for all Disaster Assistance Employees in the Acquisition Cadre (to build upon the Credentialing System developed in calendar</li> </ul>
year 2010) that provides a framework for building a qualified acquisition cadre to
make better and more consistent acquisition decisions.
<ul> <li>Increased acquisition training opportunities through the use of Web-based training,</li> </ul>
periodic in-house policy and training seminars, and self-directed "brown bag"
training sessions where employees conduct a review of GAO cases to increase the rate of acquisition lessons learned.
• Established a system of positive file controls to ensure availability and accountability
of contract files.
• With respect to the Contracting Officer Technical Representative (COTR) program, a
tiered COTR certification system now exists to ensure that COTRs are properly trained and equipped to manage contracts, on the basis of size and complexity.
COTRs are now certified at three levels, with Tier III being the highest level training.
Today, there are a total of 1456 DHS certified COTRs, with 79 being Tier II certified,
166 being Tier III certified and the remainder being Tier I certified. Approximately
260 COTRs are expected to be Tier II and III certified this year. • With respect to DHS certified Acquisition Program Managers (PMs), there are 160
<ul> <li>With respect to DHS certified Acquisition Program Managers (PMs), there are 169 certified PMs of which 94 are PM Level 1, 58 are PM Level 2, and 17 are PM Level 3</li> </ul>
certified. Level 3 is the highest level.
• FEMA established the position of Acquisition Advisor to the Federal Coordinating
Officer (FCO) to provide needed visibility for the acquisition function in a disaster
field office and to provide expedited acquisition expertise to the FCO, especially in the fact poord anyiranment of the diagram and the Third Poord anyiranment of the diagram and the Third Poord anyiranment of the diagram and the transmission of
the fast-paced environment of the disaster response phase. This position was activated for the first time during the response to Hurricanes Gustav and Ike and
proved to be quite successful in helping responders avoid unauthorized commitments,
and expedite procurements to meet their response needs.
• FEMA continues to make progress on acquisition management, balancing the use of
prepositioned contracts with the requirements of Section 307 of the Stafford Act, which pertains to requiring FEMA to contract with local vendors to the maximum
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## Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact	Orice Williams Brown, (202) 512-8678 or williamso@gao.gov.
Staff Acknowledgments	In addition to the contact named above, Randy Hite (retired), Director; William Woods, Director; Patrick Ward, Assistant Director; Tonia Johnson, Assistant Director (in memoriam); Nima Patel Edwards; Christopher Forys; Elena Epps; and Emily Chalmers made significant contributions to this report. Other contributors included Tania Calhoun; William R. Chatlos; Jim Crimmer; Marc Molino; Freda Paintsil; Karl Seifert; and Christy Tyson.

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