DEPARTMENT OF HOMELAND SECURITY

Office of Inspector General

Logistics Information Systems Need to Be Strengthened at the Federal Emergency Management Agency

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Preface

The Department of Homeland Security Office of Inspector General was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one of a series of audit, inspection, and special reports prepared as part of our oversight responsibilities to promote economy, efficiency, and effectiveness within the department.

This report addresses how well the Federal Emergency Management Agency manages information technology to support disaster response logistics activities. It is based on interviews with employees and officials of relevant agencies and institutions, direct observations, and a review of applicable documents.

The recommendations herein have been developed to the best knowledge available to our office, and have been discussed in draft with those responsible for implementation. It is our hope that this report will result in more effective, efficient, and economical operations. We express our appreciation to all of those who contributed to the preparation of this report.

Richard L. Skinner
Inspector General

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Abbreviations

ADD	Automated Deployment Database
CIO	Chief Information Officer
Corps	United States Army Corps of Engineers
DHS	Department of Homeland Security
FEMA	Federal Emergency Management Agency
FOSA	Federal Operational Staging Area
GAO	Government Accountability Office
GPS	Global Positioning System
IRRIS	Integrated Response and Recovery Information System
IT	Information Technology
LIMS	Logistics Information Management System
LMD	Logistics Management Directorate
LMTI	Logistics Management Transformation Initiative
LOG-CONOPS	Incident Logistics Concept of Operations
OIG	Office of Inspector General
TAV	Total Asset Visibility
TPM	Trading Partner Management
WM	Warehouse Management

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Executive Summary

We audited FEMA's efforts to improve the information systems used to support its disaster response logistics processes. The objectives of this audit were to (1) determine how effectively existing and proposed information technology systems improve the coordination of disaster logistics management activities; and (2) assess the adequacy of FEMA's strategies, plans, and procedures for acquiring and developing an efficient, transparent, and flexible logistics system. The scope and methodology of this review are discussed in Appendix A.

FEMA's existing information technology systems do not support logistics activities effectively. Specifically, the systems do not provide complete asset visibility of disaster goods, such as commodities and property, from their initial shipment to final distribution in disaster areas. The systems also do not provide comprehensive asset management; instead, several systems must be used to order, ship, and account for disaster goods. Additionally, the systems are not integrated and, therefore, cannot share information during disaster response. As a result, FEMA may be hindered in its ability to perform disaster response in an effective and timely manner.

FEMA has taken a number of positive steps to improve its logistics capabilities by developing a planning strategy and gathering independent evaluations of its technology and operations. These efforts will enhance FEMA's ability to assess its existing systems, identify its information technology system requirements, and select the appropriate technologies to meet its logistics needs.

We are recommending that the FEMA Administrator direct the Logistics Management Directorate to finalize its logistics strategic and operational plans to guide logistics activities; develop standard business processes and procedures for logistics activities; evaluate current technologies; and develop a strategy for acquiring information technology systems to support the logistics mission.

Background

The Federal Emergency Management Agency (FEMA) is responsible for developing a federal response capability that can act effectively and rapidly to deliver essential assistance. FEMA is responsible for saving lives and protecting or preserving property, and public health and safety in a natural disaster, act of terrorism, or other manmade disaster. In 2005, FEMA experienced significant challenges responding to hurricanes Katrina and Rita. The difficulty of responding to these hurricanes served as a catalyst for changes in federal policy and the organization of responsible federal entities, notably within the Department of Homeland Security (DHS) and in particular within FEMA.

Following the 2005 hurricane season, the Congress passed the *Post-Katrina Emergency Management Reform Act of 2006*.[1] Under the Act, FEMA became a distinct entity within DHS, with the FEMA Administrator reporting directly to the Secretary of DHS. The Act required FEMA to lead and support the Nation in a comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation. It further required FEMA to develop an efficient, transparent, and flexible logistics system for procurement and delivery of goods and services during disasters, and to improve the information technology (IT) systems that support FEMA's logistics activities.

In response to the Act, FEMA recognized disaster logistics as one of its core competencies, and it elevated logistics from a branch within its response division to a directorate. Leadership of the new Logistics Management Directorate (LMD) reports directly to FEMA's Administrator. LMD's mission is to effectively plan, coordinate, manage, and provide national logistics response and recovery operations in support of domestic emergencies and special events. LMD has identified four specific core competencies necessary to accomplish its mission:

- Logistics plans and exercises;
- Logistics operations;
- Distribution management; and
- Property management.

As illustrated in Figure 1, LMD is structured to reflect its focus on these competencies.

[1] Public Law 109-295, Title VI, October 4, 2006.

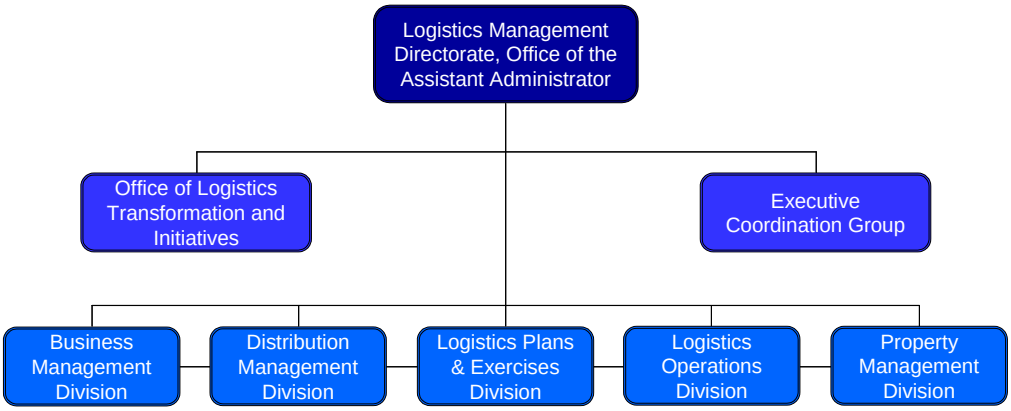

Figure 1: FEMA's Logistics Management Directorate

LMD's Office of Logistics Transformation and Initiatives is the focal point for researching, recommending, and integrating logistics transformation initiatives to enhance FEMA's disaster logistics mission. The Executive Coordination Group coordinates, facilitates, and processes replies to Congressional and other requests for information. Logistics functions are organized into five LMD divisions:

- Business Management – Responsible for human capital management, as well as budget, program, and analysis activities.
- Distribution Management – Manages FEMA warehouse facilities and transportation systems used to store, maintain, issue, distribute, and track supplies, services, material, and equipment.
- Logistics Plans and Exercises – Develops and provides logistics plans and exercises to achieve both short- and long-term readiness requirements.
- Logistics Operations – Manages and executes the command and coordination, tracking, and reporting for all hazards operations.
- Property Management – Provides management, internal control, and technical services for accountability, reutilization, and disposal of FEMA's personal property assets.

To support logistics activities, FEMA maintains eight permanent distribution centers, five of which are spread throughout the country with three centers located outside of the continental United States. These centers receive, store, ship, and recover disaster commodities, such as water and ready-to-eat meals, and property, such as the computers and office electronic equipment that are issued to responders and field facilities during disaster response. In addition, FEMA maintains an Emergency Housing Distribution and Logistics Center that provides additional storage and distribution capabilities for commodities. Figure 2 shows the location of these facilities.

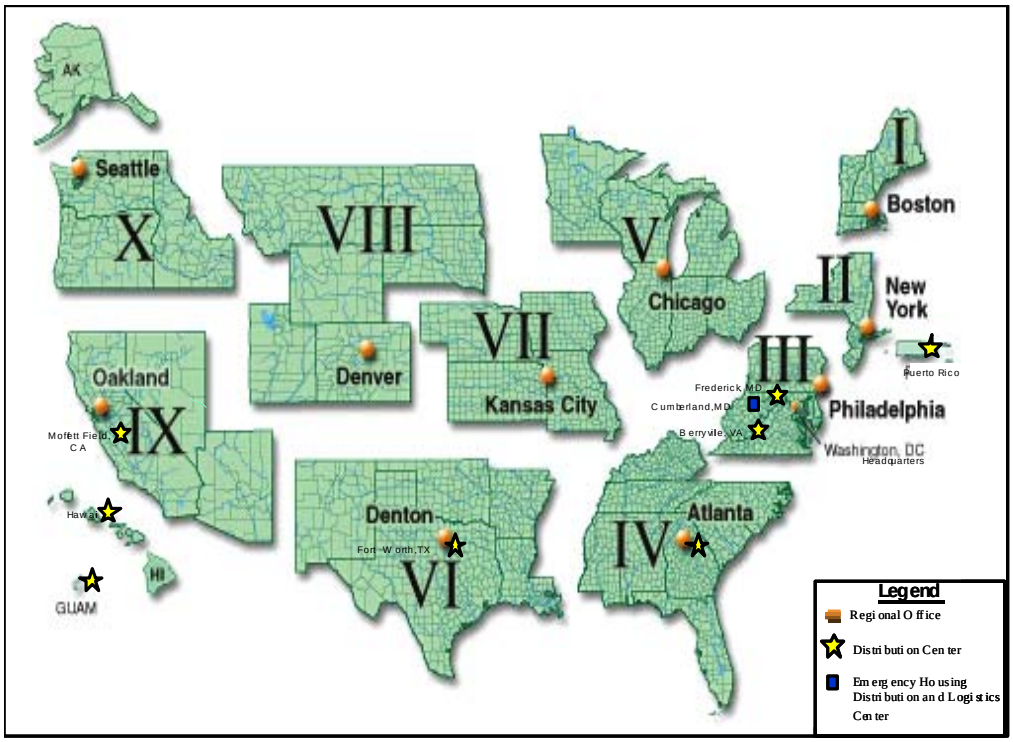

Figure 2: FEMA Offices and Facilities Locations

FEMA relies on several IT systems to support its unique inventory and process needs, including:

- **Logistics Information Management System III (LIMS)** is the system of record for personal property accountability requirements. Personal property includes items such as computers, cell phones, generators, and office furniture.

- **Total Asset Visibility (TAV)** contains a group of IT systems that support logistics activities. The program includes the following systems:

    - **eTasker** is a web-based system that field personnel use to submit requests for property and commodities to FEMA headquarters. It also coordinates information for requests that involve transportation requirements.

    - **Trading Partner Management (TPM)** facilitates and tracks the movement of property and commodities from the time they are ordered through fulfillment and shipping. The system manages orders from all regions, links order information with shipment

details, tracks specific sets of physical inventory, logs receipt of shipments at distribution centers and other regional sites, and provides updated shipment information to track changes in receiving locations.

- **Warehouse Management (WM)** manages the inventory of goods stored at the distribution centers by recording the amount of items, such as generators, cots, and bottled water, that are on-hand. WM is currently deployed in only two distribution centers—Atlanta and Fort Worth.

- **OrbiTRAX** provides the location information for global positioning system (GPS) transponders that are attached to FEMA trailers or certain FEMA items, such as generators.

- **Integrated Response and Recovery Information System (IRRIS)** is an internet-based mapping application that allows users to view the location of in-transit trailers equipped with GPS devices from the time they leave distribution centers until arrival at staging areas. IRRIS uses shipment information supplied through TPM and location details supplied through OrbiTRAX.

- **Automated Deployment Database** is used to identify and maintain a record of the personnel deployed during disasters to whom property items, such as cell phones and laptops, are issued.

In September 2005, we reported that FEMA needed an improved resource tracking system with real-time capabilities. We also reported that the systems did not support effective or efficient coordination of deployment operations because they did not share information. We recommended that FEMA analyze alternatives and determine the most appropriate approach to providing the technology needed to support business and system requirements.[2] Further, in March 2006, we reported that FEMA lacked standard operating procedures in resource ordering, had an inefficient and ineffective system for tracking requests, and the same information was entered into at least three tracking systems that were not linked.[3]

[2] DHS OIG, Emergency Preparedness and Response Could Better Integrate Information Technology with Incident Response and Recovery, OIG-05-36, September 2005.
[3] DHS OIG, A Performance Review of FEMA's Disaster Management Activities In Response to Hurricane Katrina, OIG-06-32, March 2006.

In May 2007, the Government Accountability Office (GAO) reported that FEMA should address five areas of logistics management for an effective logistics system:

- Requirements – FEMA did not have operation plans to address disaster scenarios, nor did it have detailed information on states' capabilities and resources;
- Inventory Management – FEMA's ability to track supplies in-transit was limited;
- Facilities – FEMA had little assurance that it maintained the right number of facilities in the right places;
- Distribution – Problems included poor transportation planning, unreliable contractors, and lack of distribution sites; and
- People – Human capital issues were pervasive, including in the logistics area.[4]

GAO noted that FEMA was taking many actions to transition its logistics program to be more proactive, flexible, and responsive, but that it would be several years before these areas were fully implemented and operational.

Results of Audit

Existing IT Systems Do Not Support Logistics Activities Effectively

The *Post-Katrina Emergency Management Reform Act of 2006* requires FEMA to develop a logistics system that provides visibility of disaster goods from procurement to delivery.[5] The Act also instructs FEMA to ensure that existing IT systems are compatible and share information. Additionally, other federal guidance directs agencies to select IT investments that will support core mission functions.[6]

FEMA's existing systems do not meet the requirements of the Post-Katrina Emergency Management Reform Act and do not support its core disaster response functions effectively. Specifically, the systems do not provide complete asset visibility, comprehensive asset management, or integrated information during disaster response. Without effective IT support for its

[4] U.S. Government Accountability Office, Homeland Security: *Observations on DHS and FEMA Efforts to Prepare for and Respond to Major and Catastrophic Disasters and Address Related Recommendations and Legislation*, GAO-07-835T, May 15, 2007.
[5] Public Law 109-295, Title VI, October 4, 2006.
[6] Circular A-11, Part 7, *Planning, Budgeting, Acquisition, and Management of Capital Assets*, Executive Office of the President, Office of Management and Budget, July 2007.

logistics activities, FEMA may be hindered in its ability to perform disaster response in an effective, timely manner.

Complete Asset Visibility

FEMA's logistics systems do not provide visibility over disaster goods, such as commodities and property, throughout the entire shipment process. Specifically, the systems do not track shipments end-to-end, from the initial shipment of goods to final distribution in disaster areas. Further, the systems do not track shipments of disaster goods received from all FEMA partner agencies. To perform these functions, FEMA personnel are using alternate methods, such as ad hoc IT systems and paper forms. As a result, FEMA employees expend unnecessary time and effort to track, receive, and ship disaster goods, and cannot manage the deployment of goods effectively.

Systems Do Not Track Shipments to Points of Distribution

FEMA's logistics systems do not track disaster goods from initial shipment to final delivery. To support disaster response activities, FEMA stores disaster goods in its distribution centers. During disaster response, the goods are shipped from these facilities, or from other vendors, to federal operational staging areas (FOSA), as pictured in Figure 3.[7] After receiving the goods at the FOSA location, FEMA personnel ship them to state facilities or points of distribution, where they are distributed to disaster victims.

Figure 3: FOSA at Camp Beauregard, Louisiana, August 8, 2006

[7] FOSAs are identified as National Logistics Staging Areas, or NLSAs, in LMD's draft *Logistics Management Operations Manual*.

Although the order tracking system, TPM, tracks disaster goods shipped from FEMA distribution centers to FOSAs, it does not track the goods once received at the FOSAs or when they are shipped from the FOSAs to state facilities or other points of distribution. Instead, FEMA field personnel rely on paper transfer forms to track the goods. During the Hurricane Katrina response, one FOSA generated over 20 boxes of paperwork to log the transfer of goods to state facilities or points of distribution.

Because the shipments are not tracked in TPM, the information on what has been received at or shipped from a FOSA is not readily available for FEMA managers to monitor. One regional official said that, historically, FEMA has lost track of water once it reaches the state level because it is difficult to monitor the paper transfer orders. To monitor the shipments, FEMA management have contacted field personnel regularly during disasters to determine the status of shipments. As a result, FEMA personnel spend time and effort to complete, store, and report information on FOSA inventory and shipments.

To eliminate the time-intensive paperwork process and better track FOSA shipments, FEMA field personnel developed the eFOSA system, which they use to:

- Receive shipments at the FOSA from FEMA and FEMA partners;
- Maintain an inventory of trailers and their contents; and
- Arrange and track shipments from the FOSA to points of distribution.

FEMA's Emergency Management Institute has provided training on eFOSA and distributed a Microsoft Access version of the database to many field personnel. However, eFOSA does not operate on the FEMA network; it provides information on the disaster goods only at an individual FOSA. Therefore, during disaster response, FEMA logistics managers cannot readily obtain complete information on the inventory and shipments of goods from multiple FOSAs.

FEMA has tasked a contractor to upgrade the TPM system so that it can track the shipments of goods from FOSAs to points of distribution by June 2008. However, according to the contractor, although TPM is capable of performing this function, the upgrade will make the system slower and less user-friendly because FEMA personnel will have to wait for the system to load lengthy lists of shipment locations and then navigate through those to process a shipment.

Systems Do Not Track Goods Provided by External Partners

FEMA's logistics systems do not track disaster goods provided by all external partners. During disaster response, FEMA acquires goods and services from partners, including federal and nonfederal organizations, to supplement its on-hand stocks. For example, during preparations for Hurricane Dean in August 2007, the United States Army Corps of Engineers (Corps) prepared to provide ice, water, tarps, and temporary power. Similarly, during response to the California wildfires in late 2007, the American Red Cross provided cots to disaster victims.

However, the existing logistics IT systems, specifically TPM, do not provide visibility of goods that are shipped to FOSAs from the Corps, American Red Cross, or state partners. To track the goods, FOSA managers have used paper copies of bills of lading or maintained spreadsheets with information on the shipments. More recently, they have begun to use eFOSA.

Because FEMA is not tracking electronically the goods received from partners, FEMA managers cannot use the TAV systems to view, receive, or ship these goods to disaster sites. Unaware of incoming shipments from FEMA partners, FEMA field personnel could place duplicate orders for disaster goods.

FEMA has begun to place GPS transponders on trucks carrying shipments from FEMA partners to provide greater visibility for those shipments. In addition, FEMA is working with certain partners, such as the Corps and American Red Cross, to have their shipment information input into TPM.

Comprehensive Asset Management

Logistics activities are further challenged because FEMA lacks a comprehensive system to account for its commodities, such as water and tarps, and its property, such as generators and cell phones. As a result, FEMA warehouse personnel must enter many goods into multiple systems, which may hinder their ability to receive and ship items quickly during disaster response.

FEMA personnel use two separate systems to account for commodities and property. They use LIMS to track the quantity and value of FEMA property, the location of the property, and the personnel to whom it has been issued. They use the WM system to determine the quantity of goods within a distribution center. When distribution center personnel receive a shipment of property, they access both LIMS and WM to accept the property into the

distribution center. Similarly, when distribution center personnel are shipping property from the warehouse, such as a kit of furniture and supplies for a field office, they are required to scan and log the items into both LIMS and WM. When a distribution center enters property into LIMS, the value of those items is assigned to the center or the shipment location. Entering shipments into WM adds or subtracts the quantity from the store of disaster goods available in the warehouse.

Because FEMA has implemented the WM system at only two of its eight distribution centers, WM contains information on a limited amount of goods. Therefore, FEMA does not have electronic access to inventory information for most of its distribution centers. Instead, distribution centers without the WM system rely on a combination of LIMS and spreadsheets to manage inventory. In addition, FEMA does not have electronic access to shipments between all of its distribution centers. For example, distribution center personnel can manage shipments between the two distribution centers that are using WM. However, when a distribution center that uses WM receives goods from a distribution center that does not, FEMA personnel must manually enter shipment and receipt information.

Figure 4: FEMA Distribution Center, Atlanta, Georgia

Without a comprehensive system, FEMA personnel must spend extra time and effort to manage goods. For example, when distribution center personnel prepare a kit of furniture and supplies for a field office, it requires numerous steps to complete the shipment. Personnel identify the goods to ship, package them, and then prepare a paper transfer report to document the shipment. Although the goods may leave the distribution center at that point, the systems

do not log the transfer until warehousing specialists manually enter the information into LIMS and the TAV systems, including WM. According to distribution center personnel, when staffing is low, the time-consuming paperwork and data entry forces them to choose between updating LIMS or the TAV systems. If information in these two systems is not current, FEMA management may not have an accurate account of the goods that are available for disaster response.

As of December 2007, FEMA had placed the implementation of the WM system into the remaining distribution centers on hold. A program manager explained that FEMA will not invest funds to implement WM at all of the distribution centers until it has determined its long-term plans for system development. Further, senior LMD officials stated that they are considering replacing LIMS with an integrated commercial system to provide property accountability.

Integrated Logistics Systems

Several FEMA IT systems used for disaster logistics activities are not integrated and, therefore, cannot share information. Specifically, the eTasker ordering system and the TPM order tracking system do not share information about disaster goods orders. Further, the FEMA personnel tracking system, ADD, does not share information with the property management system, LIMS. As a result, FEMA personnel use multiple IT systems to complete response activities, requiring extra time and effort and potentially delaying disaster response.

Logistics Ordering Systems Are Not Integrated

The eTasker ordering system and the TPM order tracking system do not share information electronically. FEMA field personnel request disaster goods using the eTasker system. Commodity managers at FEMA headquarters receive these requests, enter the information into TPM, and select a location from which to ship the supplies. The commodity managers must then manually enter the shipment information from TPM, such as the shipping location and order number, into eTasker.

Without integration, commodity managers must move back and forth between the eTasker and TPM systems, manually reentering data to complete an order. This process can hinder the delivery of disaster goods, since an order is not finalized and transmitted to a warehouse or distribution center for fulfillment until both eTasker and TPM have been updated.

Further, a warehouse official said that these systems, lacking integration and relying on manual entry, may contain errors or different pieces of information about an order. Because shipment and delivery of disaster goods relies on timely, accurate orders, warehouse staff must verify the accuracy of information for each order in eTasker, TPM, and WM. When the ordering process is time-consuming or orders are inaccurate, disaster response can be delayed. Several FEMA officials we spoke with said that integrating existing systems, including the TAV systems, should be a priority for FEMA.

The TAV program office has developed a plan for improving logistics systems by June 2008. This plan will provide the basis for integration of the TAV systems, such as WM and TPM, with other logistics systems, such as LIMS. However, FEMA does not plan to integrate the individual TAV systems as part of this plan. FEMA personnel continue to rely on the nonintegrated eTasker, TPM, and WM systems for disaster response activities.

FEMA Personnel and Property Systems Are Not Integrated

FEMA has not integrated other systems supporting logistics activities. FEMA accounts for personnel and property at disaster sites and field offices using the human resources system, ADD, and the property accountability system, LIMS. As we reported in September 2005, ADD and LIMS were not integrated and this hindered FEMA from providing the appropriate number and combination of people and supplies to meet disaster needs.[8] As of December 2007, these systems still were not integrated.

Without an interface between the two systems, disaster personnel must complete several different steps to manually check-in and obtain property. In addition, disaster personnel are able to check out of a disaster site using ADD without returning the property that was issued to them at that location through LIMS. FEMA personnel agreed that a link between the two systems could minimize losses by requiring personnel to return all property before they could check out of a location.

To fill the information sharing gaps between the existing personnel and property accountability systems, field personnel developed a solution. Contractors hired by regional officials created OneStop, a platform that could interface the personnel information in ADD and property information in LIMS. OneStop would automate the process of checking in and obtaining property at disaster or field locations. OneStop could also provide the

[8] DHS OIG, *Emergency Preparedness and Response Could Better Integrate Information Technology with Incident Response and Recovery*, OIG-05-36, September 2005.

oversight necessary to hold personnel accountable for the property they receive at a disaster site. However, regional officials explained that the system is not being used widely because it has not received the necessary support and buy-in for continued development from logistics officials in the ADD and LIMS program offices.

While the ADD program office and the LIMS program office have made updates and improvements to the individual systems, they have not coordinated to develop an interface between the two systems. Therefore, although the FEMA Chief Information Officer (CIO) considers this interface an existing requirement, officials from the CIO office, the LIMS program office, and the ADD program office all said that there are no plans for development of this interface. FEMA officials attributed the inaction to the need for additional funding to cover the costs of gathering requirements and user needs.

FEMA's Efforts to Improve Logistics Systems

FEMA has made efforts to improve its logistics IT systems by developing a logistics planning strategy and conducting evaluations of its operations and technology. As of early 2008, FEMA was working to finalize its logistics strategic planning documents. As part of its planning efforts, FEMA is considering the recommendations provided in a number of logistics assessments. These efforts will enhance FEMA's ability to assess its existing systems, identify its IT systems requirements, and select the appropriate technologies to meet its logistics needs.

FEMA is Making Progress with Logistics Strategic Planning

Federal guidance requires agencies to prepare a strategic plan for program activities that includes a detailed description of how goals and objectives are to be achieved, as well as details on the operational processes and information technology needed to meet immediate and long-term goals.[9] Such plans are intended to provide a basis for further defining program efforts in a program plan.

LMD has made progress in defining and documenting its strategic direction. Specifically, LMD has developed a logistics planning strategy that calls for developing three levels of logistics plans: strategic, operational, and tactical. At the time of our audit, LMD had drafted two of these plans: the FEMA Incident Logistics Concept of Operations (LOG-CONOPS) and a Logistics Management Operations Manual.

[9] *Government Performance and Results Act of 1993*, Public Law 103-62, 1993.

The LOG-CONOPS establishes how logistics will be accomplished for all hazards and throughout all incident phases. It is intended to provide the strategic management framework from which specific plans, procedures, and technology architecture are developed. It describes FEMA's logistics mission and identifies the specific roles and responsibilities for establishing, maintaining, and executing agency-wide logistics plans, policies, and procedures, as well as the development of agency-wide logistics information management and communications capabilities. It will set forth FEMA's supply chain management approach, as well as the strategies to support logistics operations.

The *Logistics Management Operations Manual* contains FEMA's vision and mission for serving as the lead federal agency responsible for logistics emergency management. It describes how FEMA and its public and private sector partners will provide logistics support to disaster victims. The manual defines logistics emergency management roles and responsibilities, and describes the strategies and processes for accomplishing logistic functions during disasters.

These strategic and operational plans will provide a framework with which FEMA can establish its logistics goals, objectives, and priorities, and identify the technology needed to support them. However, the plans are still in draft and not complete. The lack of strategic direction in finalized plans has hampered FEMA's ability to define and document standard processes and operating procedures for logistics activities.

FEMA Has Undertaken Initiatives for Long-Term Improvement

The issues discussed in this report have been longstanding problems for FEMA, and the new LMD management has expressed its commitment to address them. In addition to focusing its efforts on developing logistics plans and strategies, LMD management has taken steps to transform the logistics process by conducting a number of independent evaluations of logistics operations and supporting IT systems.

Logistics Organizational Assessment

In January 2007, a contractor delivered its assessment of FEMA's current logistics operations. The report concluded that FEMA had made great strides in its use of IT to support logistics processes. However, it also identified short-term and long-term recommendations for logistics IT improvement. Specifically, in the short-term, the assessment suggested that FEMA upgrade

its poorly integrated, point solutions to a cohesive, planned logistics information system.

Further, the report stated that long-term IT solutions should consider existing systems and ensure visibility of commodity inventories by state, other federal, and private sector enterprises. The assessment concluded that FEMA needed to better define its logistics objectives and improve its partnerships with external organizations. The report recommended that FEMA define its disaster logistics strategy, including a finalized CONOPS.

TAV Assessment

The TAV program office, with assistance from a contractor, assessed FEMA's logistics technologies in September 2007. The report stated that TAV provides strong integration capabilities to support future requirements, and that many issues could be resolved with standardization of business processes, the lack of which results in limited asset visibility.

The report recommended that FEMA:

- Engage regions in establishing standardized processes and data sharing among systems;
- Delineate between property management and supply chain management;
- Develop the resources to reduce reliance on contractors;
- Implement selected interfaces; and
- Resolve the overlap between the systems.

Logistics Management Transformation Initiative

In September 2007, after receiving the results of the previous studies, LMD took additional steps to develop long-term plans by contracting for a comprehensive assessment of FEMA logistics planning, processes, and technology. This assessment, referred to as Logistics Management Transformation Initiative (LMTI), included an evaluation, inventory, and analysis of FEMA logistics operations. Logistics officials intend for LMTI to help develop a long-term strategy that would transform FEMA's business process functions and identify IT development opportunities.

In its report issued in January 2008, the consultant said that FEMA logistics does not have a formal planning process to develop response scenarios, tailor its response capabilities, and determine service and performance levels. The report explained that planning activities develop a basis for program efforts and processes, as well as establish requirements for response activities.

In addition, the report stated that FEMA logistics has operated with an ad hoc approach and without standard processes, and FEMA has not provided the systems and processes necessary to effectively respond to disasters. The report suggested that FEMA could reduce extra time and effort by adopting standard processes for receiving goods at disaster sites and returning goods to warehouses or distribution centers.

Moreover, the report explained that FEMA has not benefited from new technologies or IT systems because it lacks standard logistics processes. For example, FEMA has invested in industry-best software, such as the WM system, but its warehouse personnel still perform many manual activities.

The LMTI assessment identified several challenges with the current IT logistics systems. The report discussed several issues similar to those identified during our review, including the lack of integration among existing logistics systems. Specifically, the LMTI assessment stated that a lack of integration or interfaces created weaknesses for eTasker, eFOSA, WM, and LIMS. Further, when systems do not interface effectively, FEMA cannot provide accurate information or improve the speed of disaster response efforts. In addition, the report stated that FEMA IT development efforts have been disjointed, resulting in a reliance on manual processes or isolated spot IT solutions. The report recommended that LMD document its core business functions and plan for IT systems to support these functions.

Senior LMD officials are evaluating the LMTI report to determine the appropriate next steps. These officials said that the LMTI assessment, unlike previous assessments, adequately considered the challenges of FEMA's disaster readiness and response mission. Specifically, FEMA and its contractor recognize that the agency must continue to respond to disasters throughout the logistics transformation process. Once LMD has evaluated the LMTI recommendations, the contractor will develop a detailed plan to implement them.

Recommendations

We recommend that the Administrator of the Federal Emergency Management Agency direct the Director of the Logistics Management Directorate to:

- **Recommendation #1:** Finalize its logistics, strategic, and operational plans to guide logistics activities.

- **Recommendation #2:** Develop, communicate, and implement standardized processes and procedures for logistics activities.

- **Recommendation #3:** Evaluate current IT systems to determine their ability to support logistics operations.

- **Recommendation #4:** Based on the results of the evaluation, develop a strategy for acquiring IT systems to support the logistics mission.

Management Comments and OIG Evaluation

We obtained written comments on a draft of this report from FEMA's Logistics Management Directorate through the Director of the Office of Policy and Program Analysis. We have included a copy of the comments in their entirety in Appendix B.

In the comments, the directorate concurred with all of the findings in our report and provided details on ongoing efforts to address the report recommendations. The directorate also acknowledged that our findings are consistent with the external assessment contracted to review logistics support operations in FEMA. In response to each of our report recommendations, the directorate summarized progress and outlined approaches for strengthening information systems in FEMA by the end of fiscal year 2010. Overall, the directorate has decided to address four core objectives to meet mission needs and provide logistics support: people; customers; processes; and systems. Specifically, FEMA will seek a professional workforce, develop permanent and professional relationships with stakeholders, outline and document key business processes, and modernize FEMA logistics systems. We believe that such efforts are good steps toward mitigating the various issues we raised in our report and look forward to learning more about continued progress and improvements in the future.

Responding to Recommendation 1, the directorate commented that it continues to address planning issues by completing draft strategic documents and meeting with internal and external stakeholders. Specifically, the directorate has developed standard operating procedures for hurricane support, a draft concept of operations for logistics support, and additional planning toward its desired role as National Logistics Coordinator. FEMA also has developed a strategic transformation vision for achieving the role of National Logistics Coordinator. In addition, in March 2008, the directorate sponsored a National Logistics Coordination conference with participants from industry and federal, state, and local governments. During this conference, participants outlined and discussed a national strategy for logistics support. Further, the Assistant Administrator, Deputy Assistant Administrator, and division chiefs have met with disaster response stakeholders to discuss new logistics support strategies.

In response to Recommendation 2, the directorate stated that conference calls and workgroups are establishing and communicating processes and procedures and expects this to be an ongoing effort as the directorate matures and becomes fully staffed. Specifically, the directorate commented that it has started to communicate standardized processes and procedures to regional

offices and personnel through conferences and weekly conference calls. In addition, a Distribution Management Strategy Workgroup develops partnerships with federal logistics stakeholders and the TAV Cadre program trains specialists to assist in asset visibility processes.

The directorate has addressed Recommendation 3, which directed FEMA to evaluate current IT systems and support, and, as a result, has begun to address Recommendation 4 by developing a strategy for acquiring sufficient IT support. In the comments, the directorate explained that existing systems were put into place before current leadership. Following on the results of a September 2007 internal assessment and a March 2008 meeting with the FEMA CIO and Logistics Management Chief, the Assistant Administrator has made a recommendation to transition logistics support to two fully integrated systems.

The response to Recommendation 4 outlined the directorate's strategy for this IT support transition. Specifically, the directorate will utilize DHS' standard property system, the Sunflower Asset Management System for property valued over $5,000. At the same time, the Assistant Administrator for Logistics has recommended that the existing TAV system be supplemented to manage asset tracking and financial accountability for commodities, such as meals, water, and tarps. Further, the directorate comments that, within the last 30 days, the CIO has obtained funding to begin these transitions. Although the directorate explains that system links and integration are necessary, staff are working toward a common goal of transitioning to the new systems by the end of fiscal year 2010.

As part of our ongoing responsibility to assess the efficiency, effectiveness, and economy of departmental programs and operations, we conducted an audit of FEMA's disaster logistics systems. The objectives of our audit were to determine:

- The efficacy of FEMA's strategies, plans, and procedures for acquiring and developing an efficient, transparent, and flexible logistics system for procuring and delivering goods and services during emergency response, and
- How effectively existing and proposed IT systems improve the coordination of disaster logistics.

To establish criteria for this review, we researched U.S. laws, regulations, and other federal guidance applicable to FEMA disaster logistics. Documentation, such as media articles and press releases obtained through internet searches, provided background information on FEMA logistics and identified specific concerns and issues. Additionally, we reviewed prior reports and congressional testimony by the White House, Congressional, DHS OIG, GAO, and industry organizations to identify their findings and recommendations related to FEMA's disaster logistics.

We met with representatives from LMD, to learn about their roles, responsibilities, and activities related to logistics. Senior FEMA officials provided briefings on the structure of the new directorate and the systems used to manage inventory and its supply chain. The Assistant Administrator for Logistics discussed his vision, goals, and priorities for the new directorate. We also met with representatives from FEMA's Office of Information Technology Services to learn how they are assisting LMD to develop and implement IT systems.

During the course of our review, we conducted site visits to two FEMA Regions, Regions IV and VI, which we selected based on disaster activity and whether they had implemented the TAV program. At each location, we interviewed representatives of the FEMA Regional Office, Distribution Centers, and stakeholders. These interviews assisted in our understanding of the logistics process, IT systems used, and the involvement of users to develop requirements for systems. In addition, we evaluated FEMA's implementation of the TAV program, its requirements, capabilities, and overall usefulness.

We also interviewed FEMA stakeholder representatives from the American Red Cross, Army Corps of Engineers, and the Georgia Emergency Management Agency. These officials offered their perspectives on FEMA logistics, interactions with FEMA personnel, and strategies for providing the

necessary disaster support. These officials also discussed their respective missions during disasters and the lack of IT interfaces to support their missions.

We conducted our audit from October 2007 through April 2008 at FEMA headquarters in the Washington, D.C. metropolitan area, as well as in FEMA Region IV (Georgia), and Region VI (Texas). We performed our work according to generally accepted government audit standards. The principal OIG points of contact for this audit are Frank Deffer, Assistant Inspector General, Information Technology Audits, and Richard Harsche, Director, Information Management Division. Other major contributors are listed in Appendix C.

U.S. Department of Homeland Security
Washington, DC 20472

FEMA

April 30, 2008

MEMORANDUM FOR: Richard Skinner
DHS Inspector General

FROM: Marko Bourne
Director
Office of Policy & Program Analysis

SUBJECT: FEMA's Response to Draft Audit OIG Report: *Logistics Information Systems Need to Be Strengthened at the Federal Emergency Management Agency*

Attached, you will find our response to the subject report.

Please contact our Audit Liaison, Brad Shefka, 202-646-1308, concerning any questions you may have concerning our review.

Attachment:
FEMA Comments, Draft Audit OIG Report: *Logistics Information Systems Need to Be Strengthened at the Federal Emergency Management Agency*

FEMA Comments
Draft Audit OIG Report: Logistics Information Systems Need to Be Strengthened at the Federal Emergency Management Agency

The FEMA Logistics Management Directorate concurs with the findings of the report and provides the following comments:

The findings of the DHS OIG report are consistent with the assessment of the Logistics Management Directorate staff in terms of the need for development and execution of strategic and operational plans for the logistics support operations of FEMA.

The OIG report contained four recommendations that the Directorate take to strengthen the Information Systems in FEMA. These recommendations were evaluated and a decision was made to focus on four core objectives to remedy the deficiencies in the Logistics Information Systems as well as develop those core competencies that would enable FEMA to meet its mission needs from a logistics perspective. These four core objectives are:

People: To develop a professional logistics workforce down to the regional level as appropriate, through aggressive hiring, training, credentialing and establishment of a professional development program. This would then serve as the foundation to foster personal as well as organizational accountability and enable results based culture to be established in FEMA logistics operations.

Customers: To develop a permanent, professional relationship with key stakeholders within both FEMA and its other federal, state and local agency partners, and with industry. The objective is through intensive partnering and sharing of best business practices, a customer focused relationship with both internal and external partners will foster even greater external coordination for disaster logistics support and greatly lend itself to a philosophy of "Bottom Up" requirements planning processes.

Processes: To develop a modern, state of the art National Supply Chain Network that fully integrates logistics planning to enhance FEMA and its partners' response capabilities. The primary foundational element of these processes is the development, documentation and execution of key business policies and processes that streamline logistics support while reducing costs in terms of funding, human resources, and redundancy of providing the same support due to lack of a coordinated effort.

Systems: Modernize the FEMA Logistics Systems, upgrading them to meet the requirements of the Emergency Response Logistics community, while simultaneously achieving full integration with FEMA financial, acquisition, and other information management systems employed by the Chief Information Officer.

Recommendation Number 1 was to "Finalize its logistics, strategic and operational plans to guide logistics activities."

Recommendation Number 2 was to "Develop, communicate and implement standardized processes and procedures for logistics activities."

The Logistics Management Directorate began to address these recommendations within its overall transformation plan beginning in the fall of 2007 by adding to its staff a professional logistician as the Deputy Assistant Administrator, and hiring three new GS-15 logisticians with over 75 years of combined logistics experience who now serve as the Chiefs for the Logistics Operations, Plans and Exercises, and Property Management Divisions. Through the leadership of these three division chiefs, coupled with the efforts of the already existing division chiefs for the Distribution Management, Business Management, and Business Transformation and Initiatives Divisions, the Directorate has developed a robust strategic transformation vision to become the National Logistics Coordinator for domestic emergency responses and special events. In essence, the FEMA Logistics Management Directorate's vision is to become the equivalent of Department of Defense's J-4. In addition, the Directorate has begun to develop not only internal metrics to measure its own performance, but also developed and communicated through conferences and weekly conference calls to all FEMA regions, standardized processes and procedures that are being implemented. Examples of these are the daily logistics partner coordination calls during active incidents, weekly Logistics conference calls to all regions Logistics Officers hosted by the Logistics Management Center (LMC), the weekly Temporary Housing Unit conference call with all storage sites for THU, and the weekly conference calls with users of the Total Asset Visibility (TAV) center.

In the first three months of 2008, the Directorate has developed standard operating procedures for support of hurricanes, an initial draft CONOPS manual for logistics support policy and procedures, and initial planning for execution of the Agency's goal of becoming the National Logistics Coordinator. In March 2008, the Directorate sponsored a National Logistics Coordination conference that brought together logistics professionals from industry, federal, state and local governments, as well as from across FEMA and DHS, where a national strategy for logistics support was outlined and discussed. Additionally, the Distribution Management Division established a joint Distribution Management Strategy Workgroup through partnering with the Defense Logistics Agency, General Services Administration, Health and Human Services, American Red Cross, United States Army Corps of Engineers, United States Northern Command and FEMA regional staff officers. The Directorate has also developed a credentialing and certification program of Agency logistics personnel, with the focus on identifying the core competencies that are needed to obtain and sustain a professional logistics staff. As the TAV Program begins its Phase 2 of deployment, the TAV Cadre program has been established, culminating in the training of 110 DAE cadres to serve as full-time TAV specialists deployed as low as the state level to maintain asset visibility of shipments. These TAV cadres are being integrated with the existing certification program for the Agency's Accountable Property Officers and Custodians. Finally, the FEMA Assistant Administrator, Deputy Assistant Administrator and Division Chiefs have travelled throughout all of the FEMA regions, as well as attended (and in some cases sponsored), meetings with federal, state and Defense Department personnel within and outside FEMA to discuss the new logistics support strategies

and explain the new FEMA concept of the Directorate of Logistics serving in essence as the Federal J-4 for domestic emergency and special events.

As the Directorate matures and is fully staffed over the next few years, many more logistics policies and procedures will be developed and implemented; a number of these basic policies and procedures will be developed and implemented within the next year.

Recommendations Number 3 and 4 recommended that FEMA evaluate current IT systems, determine their ability to support logistics operations, and based on that assessment; develop a strategy for acquiring IT systems that would support the logistics mission.

The decision to field the TAV system and approve modifications to the Logistics System of Record for property accountability was made before any of the current Logistics Management Directorate leadership was in place. In September of 2007, an internal assessment of the system of record for property was completed and the determination was made to continue with Phase I of the TAV program, with a focus of stabilizing that system but not improving on it. In March of 2008, the FEMA Chief Information Officer and the Logistics Management Chief, Property Management Division made a recommendation to the Assistant Administrator for Logistics to transfer the functions of the FEMA Logistics Information Management System to two separate systems of record, with the two systems fully integrated not only to each other, but to the overall FEMA information management enterprise. The recommendation was made to transfer the property accountability for equipment with a value of over $5,000 and property that was classified, or sensitive, to the Department of Homeland Security standard property system, the Sunflower Asset Management System (SAMS). This system was selected, as it was already being transitioned throughout DHS as the property system of record, and also because SAMS had a module called the Warehouse Management (WM) module. At the same time, a recommendation was made to build the functionality into the existing TAV system to enable that system to be used for both asset tracking, and financial accountability as the official system of record for commodities such as meals, water, tarps, blankets, cots, etc.

Within the past 30 days, the Chief Information Officer has obtained funding to begin the transition of the existing system of record to both of these systems. Funding for the existing system was reprogrammed to be used for only the minimal organizational maintenance of the system that was needed to allow for an automated transfer of data in the first or second quarter of Fiscal Year 2009. The Property Management Division assumed operational control of the TAV Program on March 17th, and the system became part of the new Logistics Systems Branch, which contained the IT Logistics System Help Desk and a newly created Integration and Future system team. The program management office of the TAV program has been merged with the Logistics Systems Branch, as have all contractors previously working solely on the TAV program.

This integration of the TAV and Logistics Systems Branch takes the first steps of transitioning of the TAV program from a contractor operated and maintained program to a government operated and maintained program, while keeping the government program managed for the TAV program intact. The Program Director provides TAV program direction and leadership, and the Branch Chief of the Logistics Systems Branch and the Chief, Integration and Future systems team work

with the program management office staff toward a common goal of transitioning to the new systems by the end of Fiscal Year 2010. It is expected that SAMS will be ready for transition by the end of Fiscal Year 2009, but the WM module in TAV must be linked with the WM module in SAMS to enable visibility as well as financial accountability of equipment used in disasters but stored at Distribution centers. Until these modules are linked, the existing system of record will be maintained to comply with Chief Financial Officer Act requirements.

The FEMA Chief Information Officer has committed to integration of the logistics systems to the rest of the enterprise systems as they are upgraded beginning in FY 2009 and continuing through 2014. The enterprise architecture and integration plans to allow visibility through integrated systems to logistics, human resources, disaster operations, financial, acquisition, and deployment databases are all funded and currently in the initial phases of development of Gap Analysis generated requirements. Throughout the remainder of FY 2008, the focus will be in determining the total customer requirements to enable transition beginning in FY 2009.

In the logistics systems area, requirements are being determined by several methods:

Over 30 Integrated Product Teams focusing on small technical aspects of the system transition have been formed, and members of the team include representatives of the CIO, CFO, Acquisition, and logistics Directorates.

In June 2008, the Property Management Division (PMD) will host a 3-day conference with selected subject matter experts from each region. The focus of the conference will be to determine region requirements, to develop a plan of action for the retraining of region staff in TAV and SAMS and to develop a new certification and training program for FEMA Accountable Officers and Custodians. From July through early fall of 2008, the PMD will concentrate on writing new training manuals and training of Division cadre to deploy to the regions in FY 2009 as the SAMS and TAV system begin to come online.

In summary, the coordinated efforts of the Chief Information Officer, the Chief Financial Officer, and the Logistics Management Directorate will not only enable the recommendations of this report to be accomplished, but the overall Directorate vision of becoming the National Logistics Coordinator for domestic emergencies and special events will largely come to fruition by the end of Fiscal Year 2009.

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