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Report to the Subcommittee on VA, HUD, and Independent Agencies, Committee on Appropriations, U.S. Senate

August 2000

DISASTER RELIEF FUND

FEMA's Estimates of Funding Requirements Can Be Improved

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United States General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

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The Honorable Christopher S. Bond
Chairman
The Honorable Barbara A. Mikulski
Ranking Minority Member
Subcommittee on VA, HUD, and
Independent Agencies
Committee on Appropriations
United States Senate

The Federal Emergency Management Agency's (FEMA) Disaster Relief Fund is the major source of federal disaster recovery assistance for state and local governments when a disaster occurs. The Fund receives an annual appropriation of up to $320 million. Amounts needed above the base level generally have been provided as emergency supplemental appropriations, usually in response to large disasters. The Fund received about $3.4 billion in regular (nonemergency) appropriations for disaster relief over the previous 10 years, whereas about $24 billion was provided through emergency supplemental appropriations. Because appropriations made to the Fund are available until spent, the Fund usually carries balances that are obligated as needed for relief or recovery projects. The balance in the Fund fluctuates continually as funds are obligated.

FEMA is required by the House and Senate Appropriations Committees to report monthly on the Fund's status. The reports are intended to enable the Congress to better monitor the availability of funds and allow for the timely preparation of requests for supplemental funds. The reports provide a snapshot of the funds available, obligations to date, remaining costs from past disasters,[1] and the anticipated costs of disasters that might occur in the remaining months of the fiscal year.

In early 1999, FEMA mistakenly projected that the Fund would have a carryover of $700 million at the end of fiscal year 1999. A month later,

[1]FEMA uses the term "remaining costs" to refer to estimates of the total federal projected costs anticipated to fully fund a disaster's damages minus obligations made to date for that disaster. Because of the time it takes to identify and approve projects, remaining costs may be outstanding for several years after a disaster occurs.

FEMA revised its monthly report to indicate that the Fund faced a potential funding shortfall and that it would run out of money before the end of the fiscal year. Concerned about whether FEMA is providing the Congress with accurate and timely information with which to make budget decisions, as well as about the impact of recent FEMA initiatives to fund projects more quickly, your Committee mandated that we, among other things, review how FEMA determines current and future funding requirements for the Disaster Relief Fund.

As agreed, this report addresses (1) the accuracy and timeliness of FEMA's estimates of remaining costs for past disasters, (2) the reasonableness of FEMA's approach to estimating the timing and cost of future disasters, and (3) the impact of FEMA's initiatives on the rate of obligating disaster relief funds.

Results in Brief

We found problems with both the accuracy and timeliness of the information FEMA provides monthly to the Congress on estimated remaining costs for past disasters. FEMA's headquarters staff relies on data provided by its regional offices to produce a monthly report to the Congress on funding requirements for past disasters. However, as of the end of August 1999, for a third of all past disasters, we found that staff from headquarters and regional offices disagreed on the amount of funds obligated to date. Collectively, differences in reported obligations between headquarters and regional staff totaled nearly $250 million—with headquarters reporting obligation amounts that were $18 million higher than the regions reported obligations. Obligation amounts reported by regional staff were both higher and lower than amounts reported by headquarters staff, and FEMA officials could not tell us which amounts were correct. When regional offices questioned the accuracy of the data, FEMA headquarters staff responsible for reconciling discrepancies initially failed to determine the cause and make the needed corrections. Instead, FEMA used the inaccurate data to report on remaining costs for past disasters. In addition, because of the time needed to assemble and analyze the data, the information on remaining costs in the monthly report is based on obligation data that are 4 to 6 weeks old. FEMA officials acknowledge that data problems exist and have taken steps to correct them. For example, FEMA is developing a new automated system to estimate remaining disaster costs on a real-time basis. The new system is projected to be operational in August 2000.

FEMA can improve its approach for estimating the timing and cost of disasters anticipated to occur during the remainder of the current fiscal year and in the forthcoming fiscal year. We recognize that it is difficult to estimate the number, severity, and timing of future disasters. However, in estimating the timing and cost of future disasters, FEMA does not adequately account for the timing of past disasters. FEMA uses the 5-year annual average level of obligations for past disasters, adjusted for inflation, as its estimate of the total cost of disasters anticipated to occur during the current fiscal year. To estimate when during the year the disasters will occur, FEMA simply allows the 5-year annual average to decline at a constant rate (8 percent) each month during the fiscal year. Using this approach, FEMA estimates that disasters costing about $500 million will occur in August and September 2000. However, these months represent the height of the hurricane season, and over the last 5 years, the average cost for disasters to FEMA has been twice this amount. We believe a better way of estimating the cost and timing of future disasters would be for FEMA to use actual monthly data on the estimated total cost of disasters that have occurred over the last 5 years. This report recommends ways for FEMA to improve its methods for projecting the timing and cost of future disasters.

FEMA's recent initiatives designed to expedite the closeout of its funding activities for past disasters has had a significant impact on FEMA's rate of obligating disaster relief funds. In particular, the formation of three teams of staff from FEMA's Office of Financial Management, referred to as "closeout teams," to facilitate the closure of funding activity for disasters occurring from fiscal years 1989 through 1997 increased FEMA's obligations and recoveries for past disasters considerably. At the end of September 1997, 419 old disasters, with a projected remaining cost to FEMA of over $3 billion, remained open. Over the next 2 years, FEMA closed out its funding activities on 382 of the disasters that had occurred from 1989 through 1997, obligating $2.9 billion in disaster relief funds. As a result, the amount that FEMA records as remaining costs for these disasters was reduced to approximately $296 million. It is less clear what impact other FEMA initiatives, such as setting goals to provide disaster funding more quickly, are having on the Fund's requirements because sufficient time has not elapsed to measure their effectiveness.

We provided FEMA with a draft of this report for its review and comment. FEMA acknowledged that data inconsistencies have occurred in reporting to the Congress on the status of the Disaster Relief Fund. It stated that it is currently revamping its process for data collection and reporting and will add controls to ensure that disaster data are updated and reported in a

timely, accurate, and consistent manner. However, FEMA expressed concern about three areas of the report that it believes needs further clarification, including our recommendation aimed at improving how FEMA projects the timing and cost of future disasters. We modified our recommendation but did not modify the report in other areas. FEMA also suggested technical clarifications, which we incorporated into the report as appropriate.

Background

FEMA's Disaster Relief Fund supports a wide range of programs providing grants to assist state and local governments and certain private nonprofit organizations. Its largest funded program, the Public Assistance program, is intended to help communities repair or replace roads, bridges, utilities, and public buildings after a disaster occurs. Similarly, its Hazard Mitigation Grant program assists communities in implementing long-term hazard mitigation measures, such as the purchase of flood-prone buildings, following a disaster. The Fund also provides people in disaster areas with temporary housing assistance and, through its Individual and Family Grants program, with grants to meet other needs.

While FEMA's budget for a given fiscal year averages approximately $2.8 billion, the Congress caps the agency's annual appropriation at $320 million or at the President's budget request, whichever is lower.[2] The remainder comes from emergency supplemental appropriations made by the Congress, as needed to respond to large disasters when they occur. Annual budget requests are based on current Fund balances and estimates of funding requirements for past and future disasters.[3] Money is appropriated to the Fund on a "no-year basis"; that is, the dollars remain available until expended. It is difficult, however, to determine funding requirements because of the uncertainties in forecasting the number, magnitude, and types of disasters that will occur in any year. Once a disaster occurs and the President officially declares that it is eligible for federal assistance, joint FEMA and state teams visit the affected communities, survey damaged and destroyed facilities, determine eligibility, and develop initial estimates of damage costs. This information makes up the Project Worksheet (formally

[2]Public Law 102-229, enacted in 1991, limits FEMA's regular Disaster Relief Fund appropriation to $320 million or the President's budget request, whichever is lower.

[3]For more information on federal funding for disasters, see *Budgeting for Emergencies: State Practices and Federal Implications* (GAO/AIMD-99-250, Sept. 30, 1999).

the Damage Survey Report). On the basis of those Project Worksheets, FEMA obligates funds for approved projects; that is, funds are made available to the state to begin repair and restoration work. However, because the time required to identify and approve projects varies (some require historical and environmental reviews, or the amount of required funding is in dispute), as does the time required to contract and perform the needed work, it is difficult to accurately forecast the fiscal years in which payments will be made for projects related to specific disasters.

FEMA provides monthly reports to the House and Senate Appropriations Committees on the status of the Fund. These reports contain information on funds available for the current year, actual obligations to date, remaining costs for disasters that have occurred to date, an estimate of funding requirements for these disasters for the remainder of the fiscal year, a projection of the costs of disasters that might occur in the remaining months of the fiscal year, and an estimate of funding requirements for the next fiscal year.

During fiscal years 1998 and 1999, FEMA implemented two program initiatives that could affect how it estimates budget requirements in the future. First, FEMA's Director chartered three closeout teams in November 1997 to expedite the closeout of the agency's funding activities for past disasters—many dating back to 1989. The teams are composed of staff from FEMA's Office of Financial Management who focus on resolving program issues and obligating funds for approved projects to close out work on specific disasters. Second, in 1998, FEMA redesigned its Public Assistance program to provide money to applicants more quickly and to simplify the application process. For example, FEMA established a goal to approve projects and obligate funds under the Public Assistance program for 90 percent of disasters within 2 years of the date on which they are officially declared disasters by the President.

FEMA Uses Inaccurate Data to Compute Remaining Costs for Past Disasters

To produce estimates of the Disaster Relief Fund's current requirements, FEMA needs accurate information on the remaining costs for past disasters. FEMA relies on its regional offices for these cost estimates. To estimate the remaining costs for past disasters, staff from the regional offices take their estimates of the total projected costs of past disasters and subtract data provided by FEMA headquarters staff on the obligations to date. Thus, the accuracy of the regions' estimates of remaining costs is dependent on the quality and timeliness of the obligation data FEMA headquarters provides to the regions. We found that, largely because of a

mistake in the process FEMA uses to extract data from its Integrated Financial Management Information System (IFMIS), errors exist in the obligation data that are provided to the regions. These errors, in turn, contribute to errors in the regions' data on remaining costs. In addition, because of the time needed to complete this process, the cost estimates produced by the regional offices for FEMA headquarters are based on obligation data that are as much as 4 to 6 weeks old. These flawed data are ultimately used by FEMA to prepare its monthly report to the Congress on the projected obligations for the remainder of the year for past disasters. FEMA has taken steps to correct the weaknesses identified in its data, such as the development of a new automated database system to replace its current system for tracking disaster costs.

FEMA Relies on Its Regional Offices for Information on Remaining Costs for Past Disasters

FEMA relies on its regional offices to periodically update cost information on past disasters. Consequently, staff in FEMA's 10 regional offices maintain a Disaster Financial Status Report on each disaster within their areas of responsibility to develop this information when it is needed for budgeting purposes.

Quarterly, FEMA's headquarters asks regional office staff to update estimated cost data, by program area, for each disaster in their database of Disaster Financial Status Reports. To assist the regional offices with the quarterly update, FEMA's Office of Financial Management provides each with a spreadsheet of obligations to date by disaster, extracted from its IFMIS. IFMIS is FEMA's official record of the Disaster Relief Fund's budget, obligation, and expenditure transactions. This system does not, however, have the capability to produce standard reports on obligations by disaster to date by individual programs (e.g., Public Assistance and Hazard Mitigation Grant programs). Thus, FEMA uses a special process to extract the obligation to date data from the IFMIS system.

Once updated, the regions forward the spreadsheets of updated cost data to the Office of Financial Management, where they are consolidated into a single national database that is subsequently used to develop FEMA's budget submissions and monthly reports to the Congress. To allow time for the regional offices to prepare their quarterly reports, the extraction is made from 4 to 6 weeks prior to the date of the monthly report. As a result, regional staff often must forecast a disaster's total estimated expenditures based on obligation data that are at least a month old. Compounding this timing problem, some obligation amounts are inaccurate because of an error in the process FEMA uses to extract the data from IFMIS and because

obligation amounts were either missing from or incorrectly recorded in IFMIS.

During our review of Disaster Financial Status Report data provided by FEMA, we found that the regions' obligation amounts often differed from the obligation amounts reported by IFMIS. Using data submitted for the August 1999 Disaster Financial Status Report, we found that the regions identified individual differences in over a third of the disasters, collectively reaching nearly $250 million nationwide. No pattern in the differences between the regions' and headquarters' obligation amounts was distinguishable. Some of the differences in obligation amounts reported by the regions were higher than the amounts provided by headquarters, and some were lower. Obligations reported by headquarters were $18 million higher than those reported by regional staff. FEMA officials were unable to tell us which numbers were correct. According to FEMA officials, several of the regional offices do not regularly update the data sent to them by FEMA headquarters. If all of the regional offices updated the data, total differences would likely have been larger. Although regional offices questioned the accuracy of the obligation data, headquarters staff responsible for reconciling data discrepancies initially failed to determine the cause and make the needed corrections.

The fact that differences exist between regional data and IFMIS data raises concern about the accuracy of the remaining cost estimates used by the regions to produce quarterly Disaster Financial Status Reports. Any difference in the data can contribute to incorrect cost estimates because the total estimated cost of a disaster equals the obligations to date plus the amount of the estimated remaining obligations. If the initial obligation amounts were incorrect, the regional cost estimates FEMA uses to produce its monthly reports on funding requirements for past disasters would also be incorrect.

Inaccurate Data Have an Impact on FEMA's Projection of Obligations for the Remainder of the Fiscal Year for Past Disasters

FEMA's approach to projecting obligations for the remainder of the year for past disasters appears to be reasonable. To produce the projection, FEMA multiplies its estimate of the remaining costs for past disasters, as of the beginning of the fiscal year, by an assumed obligation rate to arrive at total obligations for the fiscal year. Actual obligations to date are then subtracted from the current year estimate to obtain FEMA's monthly projection of obligations for the remainder of the year for past disasters. Based on our work, we believe that this approach, if used with accurate estimates of remaining costs for past disasters, would produce reasonable

estimates of remaining obligations for these disasters. Most importantly, the obligation rates currently used by FEMA are based on the most recent data available and, in our opinion, are reasonable. However, in producing its estimates of remaining obligations for past disasters, FEMA uses estimates of remaining costs for past disasters that are provided by its regional offices through its quarterly update process, as already discussed. Because of the discrepancies in these estimates, the accuracy of FEMA's projections of obligations for the remainder of the fiscal year for past disasters is questionable.

FEMA Is Taking Steps to Correct the Weaknesses in the Data Used to Estimate Funding Requirements for Past Disasters

FEMA, in researching the errors found during our review, identified two possible problems. According to FEMA officials, the first involved a systemic error in the computer program used to extract obligation data from IFMIS. The second involved errors in the IFMIS database resulting from obligation amounts that were missing, or incorrectly recorded, in the system. FEMA is in the process of correcting those problems.

The first problem FEMA officials noted involved projects that ultimately cost less than the amount FEMA initially approved. FEMA found that if a state returned the unexpended funds for a particular disaster, the method FEMA was using to extract data from IFMIS did not recognize and account for the unexpended funds. According to FEMA officials, the computer program has since been modified to recognize differences between obligations and budgeted amounts and to look for the transaction crediting the budget amount. If the credit transaction is found, the extraction program deobligates that amount. According to FEMA officials, at the end of March 2000, FEMA used the new extraction method and found that collective differences between obligation amounts reported by its 10 regional offices and IFMIS obligation amounts had been reduced to about $41 million. According to these officials, in April and May 2000, headquarters staff worked with regional staff to resolve the remaining differences. By June, FEMA had identified and corrected about $37 million in errors—leaving a total of about $3 million in differences between the obligation amounts reported by the regions and headquarters. We did not independently verify these data. FEMA is continuing to research the remaining differences.

According to FEMA officials, of the $41 million in differences between the regions' and headquarters' obligation amounts that existed after the new extraction method was employed, about $36 million, or 90 percent, was due to data errors in IFMIS.[4] According to FEMA, for various reasons, valid obligation amounts were either not recorded or were incorrectly recorded in IFMIS. For example, FEMA officials stated that while researching the cause of the differences between the regions' and headquarters' obligation amounts, they found that some refunded payments were not recorded in the IFMIS database. These involved cases in which states had made refund payments directly to FEMA. When FEMA converted from its previous financial system to the current system (IFMIS), the regional office staff manually reconciled all data between the two systems as well as the system FEMA uses for tracking the transfer of disaster funds to the states. Any unmatched, and therefore unsupported, transactions were removed from the IFMIS database.[5] In researching the errors identified in our review, FEMA staff determined that the removed transactions were actually valid credit transactions representing state refunds submitted directly to FEMA, thus bypassing the electronic funds transfer system. According to a FEMA Office of Financial Management official, a review of the records in question revealed that, at most, $1.4 million in transactions, covering disasters that occurred between 1989 and 1996, was missing from the IFMIS database. FEMA is in the process of verifying and reinstating the removed transactions.

In an effort to develop more timely and accurate cost estimates for disasters, FEMA is developing a new database system to replace its current system for tracking disaster costs. The new system comprises individual database tables for the Public Assistance, Individual and Family Grants, and Hazard Mitigation Grant programs. The new system is expected to provide complete cost information for a disaster. To ensure data integrity, the new system is expected to restrict access to only those program officials who are in the region where a disaster is managed and who have responsibility in the program area. FEMA plans to have the new automated

[4]According to FEMA's Office of Inspector General, the $36 million would not materially affect FEMA's financial statements because the net change to IFMIS from correcting the errors was about $490,000—some errors were higher and some were lower than the amount that should have originally been recorded.

[5]In reconciling the data, the staff found transactions in IFMIS that were not recorded in the system FEMA uses to electronically transfer funds to the states (i.e., the "Smartlink" system). The Department of Health and Human Services operates this system.

monthly Disaster Financial Status Report system—in combination with the new data extraction method—operational beginning in August 2000.

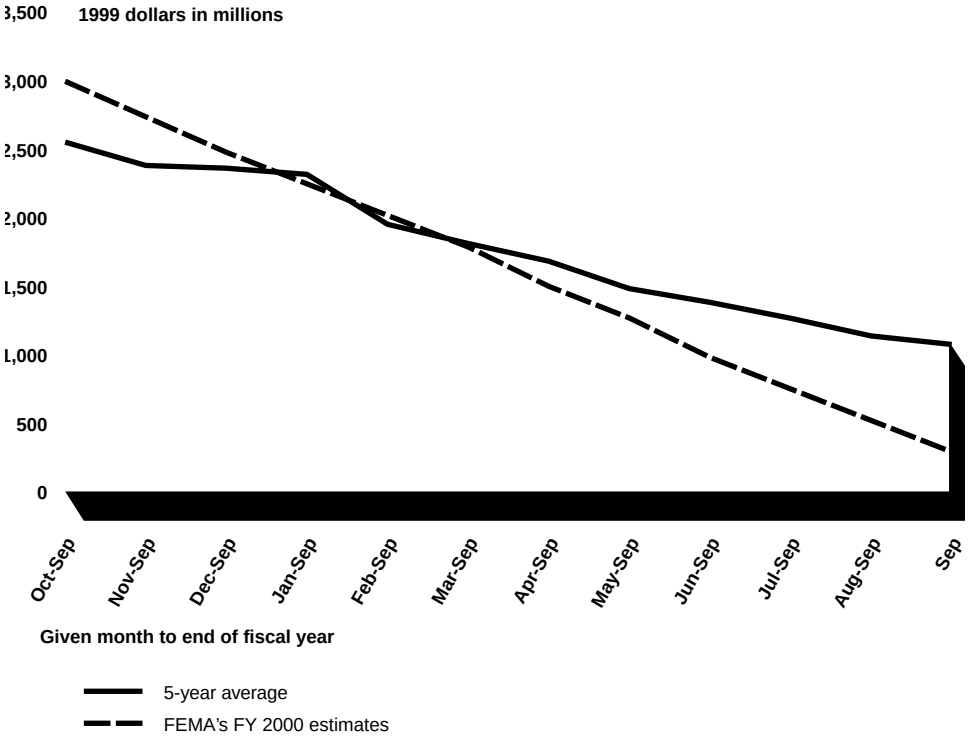
Improvements Are Needed in the Approach FEMA Uses to Estimate the Timing and Cost of Future Disasters

Improvements are needed in the methodology FEMA uses to estimate the timing and costs of future disasters. In its monthly report on the status of the Fund, FEMA includes an estimate of the total costs of disasters anticipated in the current and forthcoming fiscal year.[6] Beginning with its first monthly report in the fiscal year, FEMA allows the estimate of the total cost of new disasters to decline each month by a constant rate—about 8 percent. This approach results in a constant decline over the course of the year in the estimated costs for new disasters. However, August and September represent the height of the hurricane season, and for the past 5 years, these months have been the most costly months, on average, for FEMA. As a result, FEMA's method for distributing costs for future disasters does not adequately account for the timing and severity of disasters.

Figure 1 compares, in 1999 constant dollars, the 5-year average cost of disasters (from the month the disaster was declared to the end of the fiscal year) with FEMA's estimate of the cost of disasters to be declared during the remainder of fiscal year 2000. As shown, FEMA's estimate of the costs of disasters to be declared from December 1999 through the end of fiscal year 2000—representing the period covered by FEMA's first monthly status report for the fiscal year—is about $100 million higher than the 5-year average. Both the 5-year historical average and FEMA's estimate decline over time because there is less time left in the year for disasters to occur. However, beginning with the March 31, 2000, report, FEMA's 8-percent rate of decline causes its estimate of the cost of future disasters to become increasingly lower than the 5-year average. This result is due to the fact that FEMA's approach fails to account for the historically high costs of disasters occurring in the last quarter of the fiscal year. At the end of July, FEMA estimates that disasters costing about $500 million will be declared during August and September. However, the 5-year average cost for disasters declared during this period is about $1 billion—twice as large as FEMA's estimate.

[6]This estimate is based on the Disaster Relief Fund's 5-year average level of obligations (excluding the Northridge, California, earthquake), adjusted for inflation—$2.991 billion for fiscal year 2000.

Figure 1: Comparison of FEMA's Estimates of the Costs of Disasters Declared During Fiscal Year 2000 With the 5-Year Historical Costs for Disasters—From the Month of the Declaration to the End of the Fiscal Year



Sources: GAO's analysis of FEMA's data on estimated total costs, as of January 31, 2000, for disasters declared from fiscal year 1995 through fiscal year 1999 and FEMA's monthly report on the Disaster Relief Fund.

We believe a more accurate way to estimate the costs of future disasters would be for FEMA to base its estimate on the inflation-adjusted 5-year estimated average costs of disasters—as presented in figure 1. For each monthly report to the Congress, FEMA could calculate the 5-year average cost of disasters for the remaining months of the fiscal year. FEMA could then estimate the required amount of funding for the remainder of the fiscal year by simply multiplying the 5-year average by the assumed spend-out rate for the remainder of the fiscal year.

Recent FEMA Initiatives Have Had Considerable Impact on FEMA's Rate of Obligating Disaster Relief Funds

In early 1999, FEMA discovered that its rate of obligating disaster relief funds had increased dramatically. According to FEMA officials, much of the increase in the rate of obligations was the result of the FEMA Director's recent emphasis on expediting the closure of disasters,[7] particularly older disasters. FEMA officials also cited other recently implemented program initiatives intended to identify and fund projects faster than in the past—such as a more efficient grant delivery process—as another factor contributing to the increase in the obligation rate. It is less clear, however, what effect these more recent changes are having on FEMA's obligation rate because sufficient time has not elapsed to quantify their impact.

Closeout Teams Have Had the Greatest Impact on the Fund's Obligation Rate

In November 1997, FEMA's Director chartered three teams of Office of Financial Management staff, referred to as closeout teams, and directed them to assist FEMA regional office staff and state emergency management personnel in closing out funding activities for all past disasters.[8] The three closeout teams focused on disasters that had remaining costs for public assistance and hazard mitigation because projects under these programs often require longer planning and approval periods. Primarily, the teams collected grant information from the states and assembled the documentation needed to facilitate the projects' closure. According to a FEMA Inspector General report, the teams focused on resolving long-standing issues and obligating funds for approved projects, thus reducing the amount reported as remaining costs.[9]

The closeout teams, which were fully operational in January 1998, originally focused on disasters declared between fiscal years 1989 and 1994. After completing the closeout of these disasters, the teams were directed to assist in the closeout of disasters declared between 1995 and 1997. Their primary goal was to eliminate all remaining costs for these disasters by the end of fiscal year 1999 by obligating or recovering the funds. A total of 533 disasters were declared in fiscal years 1989 through

[7]A disaster is considered "closed" when all of the funds for the disaster have been obligated, thus reducing remaining costs to zero.

[8]Originally there were three closeout teams (Eastern, Central, and Western) whose "territories" were defined by regional boundaries. However, because of its reduced workload, the Central Territorial Closeout team was disbanded in May 1999 and the Eastern and Western Teams absorbed its workload.

[9]*Review of the Territorial Closeout Teams*, FEMA OIG, Audit Report H-02-00 (Dec. 22, 1999).

1997. When the teams began their work, almost 80 percent (419) of these disasters remained "open," representing over $3 billion in estimated remaining costs. Although the closeout teams did not completely achieve their goal of closing out all of the disasters, 382 of the 419 disasters were closed by September 1999, representing 91 percent. This resulted in reducing the estimated remaining costs for these past disasters by about $2.9 billion—leaving approximately $296 million in remaining costs.

Another factor contributing to the reduction in the number of open disasters was FEMA's February 1999 policy that established separate decision points for "programmatic disaster closure" and "financial closure." Under the new definitions, a disaster is "programmatically closed" when all decisions on the eligibility and funding of the projects dealing with it have been agreed on and the estimated costs are equal to the obligations for the disaster, in other words, when all funds for the disaster have been obligated. The "financial closure" decision point occurs when all funds are disbursed and both FEMA and the state have reconciled their costs for the disaster, which could be several years after the programmatic disaster closure occurs.

According to FEMA officials, the closeout teams had a considerable impact on the rate at which FEMA was obligating funds. The rate of obligations for disasters declared between fiscal years 1989 and 1997 increased from 42 percent in fiscal year 1998 to 71 percent in fiscal year 1999. This increase in the rate of obligations for past disasters contributed to FEMA's March 1999 estimate of a potential $900 million shortfall in the Fund by the end of the fiscal year.

The current appointments for the closeout teams will expire September 26, 2000. FEMA plans to replace the closeout teams with a Chief Financial Officer's Field Support Team, which would be operational for 2 years. The role of this new team would be, among other things, to support the regions in disaster closeout, Disaster Relief Fund reporting and financial reconciliation, and disaster grant administration.

Too Early to Determine the Impact of Other Recent Program Initiatives

In addition to the establishment of closeout teams, in September 1997, FEMA set a goal to close out the Public Assistance program for 90 percent of all disasters within 2 years of their declaration date. Also, FEMA's Director approved a redesign of the Public Assistance program in October 1998. The goals of the new Public Assistance program are to obligate 50 percent of emergency work funding within 30 days of the declaration and

to obligate 80 percent of permanent work funding within 180 days of the declaration.

According to FEMA officials, these changes have also increased the rate at which FEMA is obligating funds for new disasters. However, our examination of available data failed to reveal any noticeable increase in obligation rates for disasters declared since fiscal year 1996. This may be due to the fact that sufficient time has not elapsed to measure the effects of these changes. Over time, FEMA will need to assess the effectiveness of these programmatic changes and make the necessary changes to ensure that disasters continue to be closed out in a timely manner.

Conclusions

To ensure that FEMA receives adequate resources to respond quickly when disasters occur, the Congress needs accurate and timely information on the Disaster Relief Fund's current requirements and projected needs for future disasters. We recognize that it is difficult to precisely predict when disasters will occur or their severity. The methodology FEMA currently uses to estimate the timing and cost of future disasters tends to underestimate the cost of disasters that occur late in the fiscal year. Through better use of historical data, FEMA could provide more reasonable estimates of the timing and costs of future disasters.

Recommendation

To improve the method for projecting the timing and cost of future disasters, we recommend that the Director of FEMA base FEMA's estimate of the costs of disasters to be declared during the current and forthcoming fiscal year on the inflation-adjusted 5-year average cost of declared disasters. For each monthly report to the Congress, FEMA should use the 5-year average cost of disasters, from the date of the report to the end of the fiscal year, and should present a range of end-of-year balances based on assumptions about the timing and cost of future disasters.

Agency Comments

We provided FEMA with a draft of this report for its review and comment. FEMA's comments and our detailed responses are in appendix I. FEMA acknowledged that some data inconsistencies have occurred in its reporting to the Congress on the status of the Disaster Relief Fund. FEMA stated that it is currently taking steps to revamp and streamline its process for data collection and reporting and will add controls to ensure that disaster data are updated and reported in a timely, accurate, and consistent

manner. We support FEMA's actions taken to improve data accuracy and commend it for its quick response.

However, FEMA had three primary concerns with the report that it believes need clarification. First, the agency believes that the report overstates the magnitude of the data discrepancies and, by inference, the problems with FEMA's IFMIS database. Concerning the data discrepancies, FEMA took issue with our reporting the absolute value of the discrepancies in obligations, arguing that it is the net amount that affects the monthly reports to the Congress. This is only true, however, if it is known which numbers are correct. FEMA could not tell us which numbers were correct—a fact it acknowledges in its response. Therefore, we believe it is appropriate to report both sets of numbers, and we did not modify our report.

Second, FEMA believes that the report implies that there are problems with the official IFMIS database. We disagree. The report clearly states that the data discrepancies or errors were due largely to the process FEMA used to extract data—not the raw data in the IFMIS database.

Finally, FEMA took issue with our recommendation that it base its estimate of the costs of disasters to be declared during the remaining months of a fiscal year and the forthcoming fiscal year on the inflation-adjusted 5-year average cost of declared disasters. We continue to believe that our recommendation will help FEMA improve how it projects the timing and cost of future disasters, and we did not revise our recommendation to reflect this issue. FEMA offered an alternative recommendation that it be required to present a range of available balances in its monthly report to the Congress. We agree that it might be prudent to provide a range, as this approach could better inform congressional budget decision-making, and we modified a portion of our recommendation accordingly. FEMA also provided technical clarifications, which we have incorporated into the report as appropriate.

Scope and Methodology

To address each of our objectives, we reviewed the appropriate laws and regulations and FEMA's policies and procedures. We also interviewed officials in (1) FEMA's Office of Financial Management, Response and Recovery Directorate, and its Office of Inspector General; (2) FEMA's Disaster Finance Center in Berryville, Virginia; and (3) FEMA's regional office in Denton, Texas.

To determine how accurate and timely FEMA's estimates of funding requirements for past and future disasters are, we (1) examined FEMA's methodology for accounting for past and future disasters and (2) analyzed data from FEMA's Integrated Financial Management Information System. We interviewed officials in FEMA's Office of Financial Management to discuss their methodology and assumptions used for estimating funding requirements. We also tested a sample of financial data for several disasters to determine the accuracy of the obligation data that are ultimately used for determining fund requirements. We did not, however, conduct a reliability assessment of FEMA's Integrated Financial Management Information System because a recent assessment by FEMA's Office of Inspector General highlighted the strengths and weaknesses of the system.[10]

To determine what impact recent FEMA initiatives have had on the rate of obligating disaster relief funds, we (1) reviewed summary reports prepared by each of the closeout teams, (2) interviewed officials assigned to the closeout teams to ascertain their methodology for assisting in the closeout of old disasters, and (3) interviewed officials in FEMA's Office of Financial Management to identify changes in their assumptions used for determining Disaster Relief Fund requirements. We reviewed FEMA's guidance to its field offices and state emergency management offices concerning recent programmatic changes. We also obtained and analyzed data on the rate at which FEMA incurred obligations.

We performed our work from August 1999 through July 2000 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the appropriate congressional committees; the Honorable James L. Witt, Director of the Federal Emergency Management Agency; and the Honorable Jacob J. Lew, Director of the Office of Management and Budget. We will also make copies available to others upon request.

[10] *Review of FEMA's Integrated Financial Management Information System (IFMIS),* FEMA OIG, H-10-99 (July 15, 1999) and *Management Letter on FEMA's Fiscal Year 1999 Financial Statements,* FEMA OIG, H-07-00 (June 5, 2000).

If you have any questions about this report, please contact Pat Moore or me at (202) 512-7631. Key contributors to this assignment were Pat Valentine, Rick Smith, and Thom Barger.

Stanley J. Czerwinski
Associate Director, Housing and
Community Development Issues

Comments From the Federal Emergency Management Agency

Note: GAO's comments supplementing those in the report text appear at the end of this appendix.

Federal Emergency Management Agency
Washington, D.C. 20472

JUL 31 2000

Mr. Stanley Czerwinski
Associate Director, Housing and
Community Development Issues
General Accounting Office
Washington, D.C. 20548

Dear. Mr. Czerwinski:

Thank you for the opportunity to respond to your draft report entitled, "Disaster Relief Fund: FEMA's Estimate of Funding Requirements Can Be Improved."

The General Accounting Office (GAO) has undertaken a very useful and thorough, though difficult and complex task in completing this audit. The process used to compile Disaster Relief Fund (DRF) financial data for the purpose of forecasting budget requirements and projected DRF fund balances involves many organizations within FEMA. The Agency is tracking over $28 billion in projected and obligated costs since FY 1989, for over 500 declared disasters and emergencies, throughout the 10 FEMA regions. The reporting platform for this process relies on both the Agency's Integrated Financial Management Information System (IFMIS) and the Disaster Financial Status Report (DFSR) national data base system. This effort requires significant coordination between the Office of Financial Management (OFM) and the regional offices that actually manage the disaster activity and have the program expertise to develop the individual disaster projections.

We acknowledge that there have been some data inconsistencies associated with the current process. As a result, we are currently engaged in revamping and streamlining the data collection and reporting process. The new process, when implemented in August 2000, will provide additional controls to ensure that disaster data is updated and reported in a timely, accurate, and consistent manner throughout the Agency.

We believe that the report overstates the magnitude of the data discrepancies and by inference problems with the official IFMIS database, and the impact on the overall forecasts for the DRF. We also take issue with the report's only recommendation relating to improving the method for forecasting the timing and cost of future disasters. We feel that the recommendation's premise, while interesting, is not necessarily a better predictor of the projected costs for disasters than FEMA's current method.

In the following sections, we address three main areas of concern from the report which we believe are in need of further clarification and comment. In addition, we are providing technical corrections to the report as an attachment to this letter.

Now on pp. 2, 7, 8, and 9.

See comment 1.

Now on p. 9.

See comment 2.

Now on pp. 2 and 7.

See comment 3.

See comment 4.

Magnitude of Inaccurate Data and the Impact on DRF Forecasts

The report cites collective differences between headquarters and regional obligations of $250 million and $41 million (pages 3, 8, and 10). Although we understand how GAO developed the collective numbers (i.e., adding each difference, regardless of whether the specific disaster account total was correct), we do not understand their significance since collective numbers do not affect the reports to Congress. These reports are based on the overall balance in the accounts, after they have been increased or decreased. To illustrate, a $2.2 million collective difference was resolved within IFMIS by decreasing one sub-account by $1.1 million and increasing another sub-account by the same amount. The overall balance in IFMIS remained unchanged, and therefore the collective difference had no affect on the Congressional reports.

Another indication that the reports are not materially wrong is discussed in the footnote on page 10 of the draft report. After carefully reviewing the obligations from the regions and headquarters, so far we have increased the obligations in IFMIS by only about $490,000, or less than 0.02 percent of the total obligations of about $28 billion.

The report discussion (pages 3 and 8) that "FEMA officials could not tell us which amounts were correct" should also point out the magnitude of the workload associated with determining whether the errors were in the regional or headquarters records. Some of the differences were attributable to people comparing data generated at different times from various systems. The causes of the other discrepancies, however, were much more difficult to determine. Identifying which set of data was inaccurate (i.e., the data extracted from IFMIS for the DFSR or the data the regions extracted from various sources) was a time consuming and labor intensive task that required looking at transactions and records for over 500 major disaster declarations, 60 emergencies, and 280 fire suppression agreements totaling about $28 billion over 11 years and spread across nearly 200 object codes and 350 organization codes. Without researching each transaction, we could not readily tell which number was correct.

Last summer, FEMA began intensive work on a new system to collect projected costs. Recognizing the limitations of the electronic spreadsheets used for the current DFSR, FEMA began developing a new system using the Agency's standard Microsoft Access Database software. The new system will give regional personnel more time to review and analyze the validity of the data by freeing them from much of the data entry work, implement certain business rules to ensure the validity of data when it is entered rather than relying on subsequent reviewers to identify problems, and improve the timeliness of the data so that errors are more apparent.

The new DFSR system has been introduced to the regional offices by OFM personnel from the Disaster Closeout Team and the Disaster Finance Center working side-by-side with regional personnel to reconcile any differences in the obligation data extracted from IFMIS with the various records maintained in the region. Needed changes have been made as appropriate.

FEMA's Integrated Financial Management Information System (IFMIS)

See comment 5.

In most instances, the report accurately reflects that the data problems existed in an extraction of data from IFMIS, rather than the raw data in IFMIS. However, it does not consistently make that distinction, and consequently there is an inference of underlying inaccuracies in IFMIS reports other than the ones driven by the DFSR. The DFSR requires an extraction due to the way users wished to have the data presented, in columnar format. With the exception of the minor discrepancies which related to refunds from States, which the report references, the errors identified strictly relate to the previously-employed logic behind the extraction of data from IFMIS for the DFSR. The standard reports generated from IFMIS are accurate and agreed to by the regional staffs.

Recommendation for Improving the Method for Forecasting Future Disaster Costs

See comment 6.

The report discusses, and ultimately recommends, using a five-year average of the projected cost of disasters from the month the disaster was declared to the end of the fiscal year as an estimate for disaster costs in the remaining months of the fiscal year. The report compares its recommended method to FEMA's current practice, which allows the estimate of the total cost of new disasters to decline each month by a constant rate. The rationale for this method is that the timing and cost of disasters is so unpredictable that there is no discernible pattern from year to year. The report states, "FEMA's approach fails to account for the historically high costs of disasters occurring the last quarter of the fiscal year."

In comparing GAO's averages to disaster projections for the July to September timeframe over the last 11 years, it appears that the GAO methodology would have come close to successfully predicting activity in FY 1999 and FY 1996. For FY 1989 (Hurricane Hugo in September), FY 1992 (Hurricane Andrew in August), and FY 1998 (Hurricane Georges in September), GAO's methodology would have been superior to FEMA's, but still would have been quite inadequate. For the other 6 years, FEMA's methodology would have been better; while FEMA's would have been too high in some cases, GAO's prediction would have been considerably higher. Those 6 years featured disasters with considerable costs, but they were not hurricanes in the last few months of the fiscal year.

See comment 6.

GAO also recommends that FEMA use the five-year average of costs (which we assume to mean total projected costs) as a predictor of disaster activity in the next fiscal year. FEMA currently uses the five-year average for actual obligations, less the extraordinary Northridge earthquake disaster that occurred in FY 1994, to estimate costs for the following fiscal year. FEMA prefers the five-year average of obligations because the five-year projected cost would vary from month to month, particularly for the last fiscal year of the average. As a disaster ages, the total projected cost stabilizes, but the projected cost for disasters in the fiscal year immediately preceding the current year tends to fluctuate.

See comment 7.

Because of the questionable reliability of the methodologies in any given fiscal year, an alternative recommendation might be that FEMA present a range of available balances in its

monthly report so that Congress will be less "surprised" by swings in estimates caused by the unpredictable nature of disasters.

Technical Corrections:

We are also providing, as an attachment, technical corrections for the record.

We appreciate the opportunity to comment on this report. We acknowledge that a sound and accurate process for developing DRF funding requirements and resultant budget forecasts is a critical requirement. We feel that overall the Agency has done a credible job in this area, although we acknowledge that improvements to our current process can be made. We have taken the necessary steps to both improve and streamline the data collection and reporting process, which we believe will lead to more timely and accurate forecasts.

If you have any questions regarding our response, please contact Matt Jadacki, Deputy Chief Financial officer, at 202-646-3545.

Sincerely,

Patricia A. English
Acting Chief Financial Officer

Enclosure

cc: Director
Chief of Staff
EAD, RR
OCLA
FEMA OIG

GAO's Comments

1. We disagree with FEMA's statement that our report overstates the magnitude of the data discrepancies we uncovered in the Disaster Financial Status Reports database. The difference between our views and FEMA's centers on the significance of reporting collective numbers to indicate the absolute value (total dollar amount) of differences between headquarters and regional offices. FEMA questions the significance of this reporting, stating that collective numbers do not affect the reports to the Congress. This is true only if the collective numbers are derived from numbers that are correct. As we stated in our report, FEMA officials could not tell us which amounts were correct, and the agency acknowledges this. It is one of the reasons for reporting the collective differences. Another reason is that we believe that it is important to give some perspective as to the size of the total differences in obligations—differences that affect a third of all past disasters and range from as little as $1 to almost $25 million.

As a result of our work, FEMA used a new data extraction technique at the end of March 2000 to produce a new set of IFMIS obligation amounts, by disaster. In April of 2000, we requested that FEMA provide us with two Disaster Financial Status Reports, one using the old extraction method and a second using the new extraction method. A comparison of obligation amounts in each of the reports would have provided an indication of how errors caused by the old extraction method affected the reports to the Congress. FEMA declined to provide the reports.

2. We disagree with FEMA's statement that a footnote in the draft report suggests that the reports to the Congress are not materially wrong. The footnote refers to the $36 million in corrections to obligation errors in IFMIS that were made after FEMA developed a new method for extracting data from IFMIS. Once FEMA identified and corrected these errors, it was determined that the net amount in error did not materially affect FEMA's financial statements. However, as FEMA acknowledges, the majority of errors we uncovered were caused by problems that existed in the original method FEMA used to extract data from IFMIS. As noted above, we have no way of knowing the total amount of errors caused by the old extraction method, and FEMA declined to provide us with the information needed to make this determination.

3. We agree with FEMA that it can be both labor-intensive and time-consuming to resolve differences in amounts reported by regional and headquarters staff, especially given the large number of disasters involved.

However, FEMA's own guidelines for submission of the quarterly Disaster Financial Status Report states that regions should work with FEMA's Office of Financial Management and the respective Territorial Closeout Office to ensure consistent reporting and to resolve any discrepancies in data errors. The intent was to resolve the discrepancies in a timely manner. We found that regional staff repeatedly reported many of these differences to FEMA's Office of Financial Management, but no action was taken to resolve them until we inquired about the discrepancies. If FEMA had followed its guidelines and taken steps to correct the errors when they were first reported, fewer differences would have been carried over from prior Disaster Financial Status Reports, and the number of transactions and records needing research would likely have been smaller.

4. As discussed in the report, we recognize that FEMA is developing a new system for tracking disaster costs that is intended to reduce or eliminate the types of discrepancies that occur in the current system.

5. We did not intend to imply, and did not state in our draft report, that there are problems with standard IFMIS reports. Our report indicates that FEMA determined in March 2000 that most of the differences in obligation amounts were attributed to the extraction of data from IFMIS. The report also discusses the fact that FEMA made $36 million in corrections to IFMIS that were not, however, related to the extraction process. FEMA identified the need for these corrections as a result of its use of a new extraction method.

We disagree with FEMA's statement that “With the exception of the minor discrepancies which related to refunds from States, which the report references, the errors identified strictly relate to the previously-employed logic behind the extraction of data from IFMIS for the DFSR.” As we state in our report, the problem with the state refunds not being reported in IFMIS, which totaled $1.4 million, was just one example of errors found in the IFMIS data. The $36 million in errors in IFMIS—representing differences between headquarters and regional data—have now been corrected, according to FEMA.

6. FEMA provides two reasons for why it believes our recommendation for improving the method for projecting the timing and cost of future disasters would not necessarily result in better forecasts of the costs of future disasters. First, FEMA believes that the timing and cost of disasters are so unpredictable that there is no discernible pattern from year to year. Second, FEMA believes that it is better to use the 5-year average of annual

obligations, as opposed to the 5-year average of projected cost for disasters as we recommend, because disaster cost data tend to fluctuate in the year preceding the current one. While we agree that the timing and cost of natural disasters are unpredictable, historically most hurricanes have occurred during August and September. FEMA's methodology basically assumes that no major hurricanes will occur in these months. This approach does not seem reasonable when one considers that, as FEMA points out, major hurricanes have occurred during this period in 5 of the last 11 years and in 3 out of 4 years since 1995. We do not agree, however, with FEMA's use of the 5-year average of annual obligations to estimate future disaster costs. While total cost projections stabilize after the first year, annual obligations are influenced by obligations occurring for disasters that are as much as 10 years old. In addition, as pointed out in our report, annual obligations for fiscal years 1998 and 1999 have been significantly influenced by the recent activities of the closeout teams. The teams focused on a large backlog of old disasters, which have now been mostly closed out. However, the effect on FEMA's 5-year average of obligations will be felt over the next 4 years. It is also important to point out that FEMA consistently uses disaster cost projection data in producing its monthly reports to the Congress.

7. We agree that, given the uncertainty about the timing and cost of natural disasters, it may be prudent for FEMA to provide a range of available end-of-year balances in its monthly reports. The balances would be based on different assumptions about if and when a disaster may occur and how costly it might be. This approach could better inform congressional budget decision-making. We modified our recommendation to reflect this issue.

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