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BY THE COMPTROLLER GENERAL

Report To The Congress

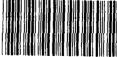
OF THE UNITED STATES

Requests For Federal Disaster Assistance Need Better Evaluation

Since 1970 the President's Disaster Relief Fund has provided over \$3.8 billion to individuals and State and local governments. The Federal Emergency Management Agency, in assessing eligibility for disaster assistance, has had difficulty in determining whether State and local governments are capable of handling their own disasters and whether they are committing a reasonable amount of their available funds for disaster relief. GAO also found that the Agency has adopted a controversial costsharing policy and has funded other than natural disasters.

GAO recommends that the Congress clarify (1) the extent of supplemental Federal assistance to be given and (2) what kinds of disasters are eligible for Federal assistance. The Federal Emergency Management Agency should analyze the impact potential State inequities have on Federal disaster assistance and submit a detailed plan and legislative changes to the Congress to correct such weaknesses.





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COMPTROLLER GENERAL OF THE UNITED STATES WASHINGTON D.C. 20548

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To the President of the Senate and the Speaker of the House of Representatives

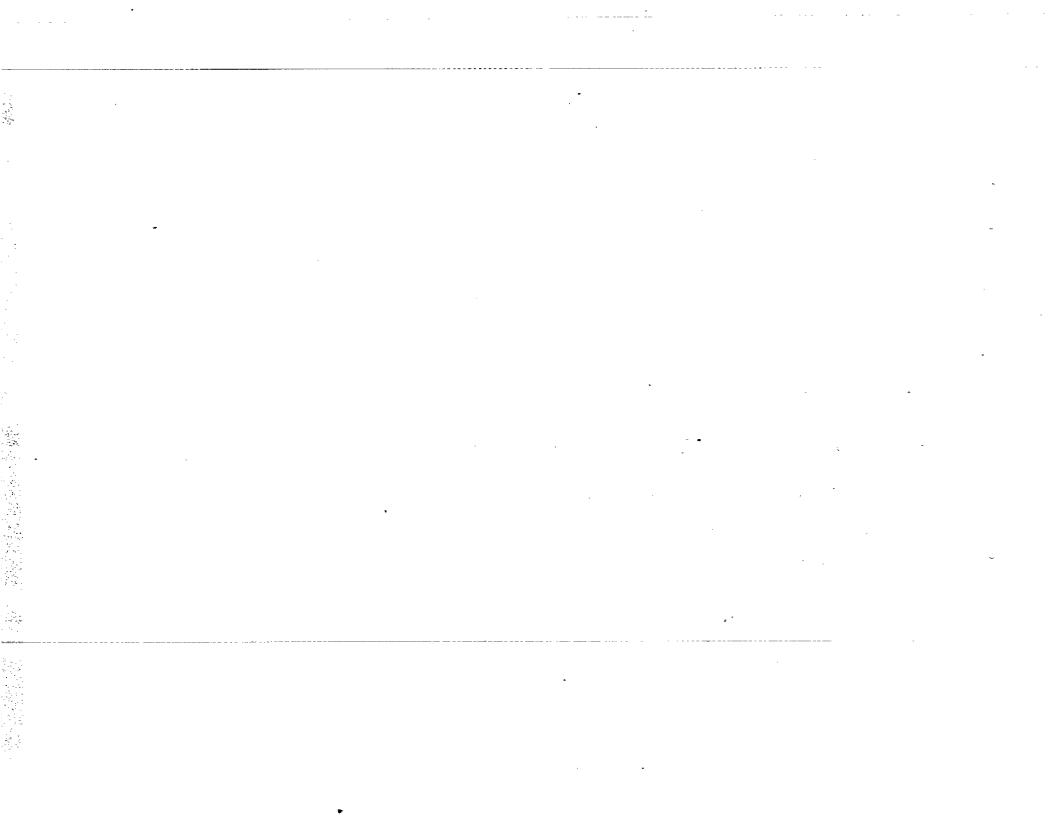
This report describes the difficulties the Federal Government faces in assessing the eligibility of State and local governments for supplemental disaster assistance. It recommends that the Congress clarify the extent of disaster assistance provided to the States and the Federal role in "non-natural" disasters. It also recommends that the Federal Emergency Management Agency (FEMA) take specific actions to improve its capability to evaluate disaster assistance requests.

This review addresses concerns arising from previous GAO reviews regarding the disaster declaration process and FEMA's role in making recommendations to the President. This issue is important because of the substantial Federal payments which can result from this process. FEMA's proper assessment of requests for disaster assistance is crucial to Presidential decisions to grant or deny Federal disaster assistance.

We are sending copies of this report to the Director, Office of Management and Budget; the Director, Federal Emergency Management Agency; and interested congressional committees, subcommittees, and individual Members of Congress.

Comptroller General of the United States

Charles A. Bowsk



DIGEST

From fiscal year 1970 through April 1981, the President provided individuals and State and local governments with over \$3.8 billion from the President's Disaster Relief Fund. This included 376 major disasters and 84 emergencies. From the beginning of fiscal year 1979 through April 1981, the President provided disaster relief assistance of over \$1.2 billion in 73 major disasters and 17 emergencies. Since the beginning of fiscal year 1979 other Federal agencies have also authorized loans or provided direct assistance totaling \$1.6 billion.

GAO initiated this review to address concerns arising from previous reviews regarding the disaster declaration process and the Federal Emergency Management Agency's (FEMA's) role in making recommendations to the President. This issue is important because of the substantial Federal payments which can result from this process. GAO found problems existed in determining the reasonableness of disaster assistance provided by State and local governments. GAO also found that FEMA has adopted a controversial costsharing policy and has funded other than natural disasters. (See pp. 7, 22, and 35.)

The Federal Disaster Relief Program is intended to <u>supplement</u> the assistance States, their political subdivisions, private relief organizations, and citizens provide for disaster relief. If a catastrophe is of sufficient severity and magnitude to warrant Federal assistance, the President can declare a major disaster or emergency. A broad range of assistance then becomes available to individual disaster victims and State and local governments. (See pp. 1 through 3.)

FEMA evaluates requests from State Governors for assistance and recommends declarations or denials to the President. Since the beginning of fiscal year 1979, 90 major disaster and emergency requests have been declared and 64 requests have been denied. GAO undertook this review to determine the type and amount of information FEMA obtains, the criteria it uses to evaluate the requests, and the bases for its recommendations. (See pp. 3 and 5.)

GAO is making a number of recommendations to the Director, FEMA, to ensure that each request for major disaster or emergency assistance is treated in a fair and equitable manner. GAO is also recommending that the Congress clarify a number of issues so that FEMA can better administer the law according to the Congress' intent. (See pp. 19, 33, 34, 38 and 40.)

DETERMINING REASONABLENESS OF STATE AND LOCAL GOVERNMENT ASSISTANCE

when FEMA receives a major disaster or emergency request for assistance from a State Governor, it needs to quickly evaluate the situation and determine whether a declaration should be made. These requests vary greatly as to form and content and do not always fulfill the requirements of law or contain all of the types of information FEMA uses to evaluate requests. (See pp. 8, 22, 24, and 28 to 31.)

FEMA assesses the severity and magnitude of the situation and the capability and resource commitments of the State and local governments and makes its recommendation to the President. Assessment of severity and magnitude are reasonably consistent but those of capability and commitment vary greatly because of the type, quality, and degree of information considered.

GAO's review of 31 disaster requests disclosed that FEMA uses a wide range of information in arriving at its decisions. For example, FEMA considered "State surplus" information in only seven requests. The lack of consistency in the quality and method of assessments and the lack of knowledge by others as to FEMA's methods of evaluation can create doubt as to whether the Federal Government is only providing supplementary assistance and whether each request is judged in a fair and equitable manner. (See pp. 7, 22, and 28 through 32.)

FEMA's policies, procedures, and guidelines for evaluating requests are not widely known. Disclosing internal assessment processes would help State and local governments decide whether they had a valid request to make, enable them to provide more complete and uniform information, and minimize doubts as to whether their requests are treated in a fair and equitable manner. (See pp. 32 and 33.)

GAO is recommending that the Director of FEMA reevaluate and improve its assessment criteria; publish the policies, procedures, and guidelines which FEMA uses to evaluate requests in the Federal Register; develop comprehensive, uniform forms for State and Federal officials to use; require Governors to provide the information necessary for the evaluations; and make it clear that future requests which fully comply with Federal laws and regulations will help avoid delays in processing the requests. (See pp. 19, 33, and 34.)

GAO is recommending that the Congress direct FEMA to prepare a comprehensive analysis of the impact potential State inequities have on Federal disaster assistance and submit a detailed plan and legislative changes to the Congress to correct such weaknesses. GAO made this same recommendation to FEMA in 1979. 1/ (See p. 34.)

THE CONGRESS NEEDS TO CLARIFY DISASTER ASSISTANCE ISSUES

Two recent actions have raised concerns that FEMA may have changed the scope of the Disaster Relief Act. First, in May 1980, FEMA adopted a general policy of requiring State and local governments to agree to pay 25 percent of the eligible costs of public assistance programs. This policy removes the administrative problems associated with attempting to determine a "reasonable" commitment for each disaster and assures compliance with the statutory purpose that the Federal aid be supplemental.

Although FEMA's cost sharing policy is consistent with the act, it has created controversy among the States. State officials contend that the policy forces them to pay for disaster relief costs which the States believe are beyond their capability to assume or which constitute more than a reasonable amount of State and local funds. Because of the controversy, GAO believes that the Congress needs to clarify its intent on this matter.

Second, the President has provided disaster assistance for such events as the Love Canal chemical contamination and the Cuban refugee

^{1/&}quot;Federal Snow Removal Reimbursement Policy: Improvements Needed" (CED-79-97, Aug. 2, 1979).

influx in Florida. This action has stirred considerable controversy as to whether other than natural catastrophes are within the purview of existing law. Although congressional intent is not clear on this matter, the act does allow the President to make declarations for other catastrophes. (See pp. 35 through 40.)

GAO is recommending that the Congress reevaluate the act and clarify its intent with regard to the extent to which supplemental Federal assistance should be given in a major disaster and the types of incidents that may receive disaster assistance. (See pp. 38 and 40.)

AGENCY COMMENTS

The Director, FEMA, said this report has a number of worthwhile comments regarding the problems associated with State and local government commitments, State and local government capability, and cost sharing. He said most of GAO's recommendations will be considered during FEMA's current revision of a regulation relating to the declaration process. The Director did not agree to GAO's proposal that FEMA use computer modeling as a tool for program decision—making and evaluation. (See app. III.)

Shortly after receipt of the Director's comments, FEMA established a plan for considering all of GAO's recommendations, including a review of computer applications, with final regulatory action to be completed by September 30, 1982. Until the regulation is issued and other actions are completed, GAO has no basis for evaluating the Director's response to its recommendations or the FEMA plan. GAO continues to believe that the adoption and use of computer modeling would aid FEMA in (1) developing more uniform data, (2) refining assessment criteria, (3) providing more uniformity in program evaluations, and (4) giving FEMA officials better management control over the operation of its disaster assistance program.

The Director's comments and GAO's evaluations are also contained on pp. 10, 13, 19, 20, 21, 27, 31, 32, 34, 38, and 39.

C<u>ontents</u>

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	ABBREVIATIONS	
DR&R	Disaster Response and Recovery	
FEMA	Federal Emergency Management Agency	
GAO	General Accounting Office	

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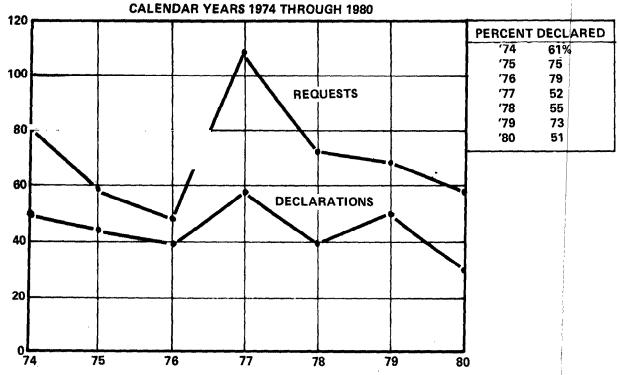
CHAPTER 1

INTRODUCTION

In 1950 the Congress enacted the first comprehensive disaster relief program. This program authorized the President to provide assistance for the temporary repair of local governments' public facilities. Subsequent laws have extended this assistance to include individuals and State governments and have broadened the extent of coverage to include permanent repairs of public facilities and other items. The present law contains a wide range of grants and direct assistance programs for individuals and State and local governments.

From the beginning of fiscal year 1970 through April 30, 1981, the President received 729 requests for major disaster or emergency assistance. Federal assistance of \$3.8 billion was provided under the President's program for the 376 major disasters and 84 emergencies that were declared. Figure 1 compares requests with Presidential declarations of major disasters and emergencies from calendar year 1974 through calendar year 1980.

FIGURE 1
PRESIDENTIAL DECLARATIONS OF MAJOR DISASTERS
AND EMERGENCIES



Source: Federal Emergency Management Agency

DISASTER RELIEF PROGRAM

When a disaster threatens or occurs, local authorities take immediate steps to warn and evacuate citizens, alleviate suffering, and protect life and property. If additional help is needed, the Governor may execute the State's emergency plan or commit State resources.

The President's Disaster Relief Program is intended to supplement the assistance provided by the States, their political subdivisions, private relief organizations, and citizens. When Governors believe that supplemental Federal assistance is necessary they may request that the President declare a "major disaster" or an "emergency" to implement the provisions of Public Law 93-288, the Disaster Relief Act of 1974. This act defines major disaster as any:

"* * * hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, or other catastrophe in any part of the United States which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act, above and beyond emergency services by the Federal Government, to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship or suffering caused thereby."

In certain instances, the full range of assistance available with a major disaster declaration may not be required. In such cases, the Governor may decide to request the President to declare an emergency, which would provide specialized assistance to meet a specific need that the Federal Government is uniquely able to provide. An emergency is any of the various types of disasters included in the definition of a major disaster which requires Federal emergency assistance to supplement State and local efforts to save lives; protect property, public health, and safety; or avert or lessen the threat of a disaster.

The Governor's request for a major disaster declaration by the President must be based on a finding that the situation is of such severity and magnitude that effective response is beyond the State's and affected local governments' capabilities and that Federal assistance is necessary. The Governor must certify that a reasonable amount of State and local funds had been or will be used (of which State commitments must be a significant proportion). The Governor must also estimate the extent and hature of Federal assistance required for each of the disaster-affected areas. In conjunction with the Governor's request for a major disaster declaration, the Governor must take appropriate action under State law and direct the execution of the State's emergency plan.

A Presidential declaration of a major disaster makes a broad range of Federal assistance available to individual disaster victims and State and local governments. This help may include temporary housing, minimum essential repairs to residences, disaster unemployment assistance, food stamps, individual and family grants to meet disaster-related necessary expenses, and various other services. Assistance to governmental jurisdictions may be directed at debris removal; emergency protective measures; or repair or replacement of roads, streets, bridges, water control facilities, and other public facilities.

After the President declares a major disaster or emergency, the Federal Emergency Management Agency (FEMA), based upon the Governor's request, designates the areas within the State that will receive assistance and specifies the type of assistance that will be provided.

Program statistics

The President may approve or deny a Governor's request for a major disaster or emergency declaration. The following table identifies the disposition of all requests for fiscal years 1979, 1980, and 1981 through April 30.

	<u>1979</u>	1980	1981	Total
			(7 months)	
Major disasters: Declared Denied	42 6	25 <u>29</u>	6 <u>11</u>	73 46
Total	48	<u>54</u>	<u>17</u>	119
Emergencies: Declared Denied	11 _9	5 <u>5</u>	1 4	17 18
Total	20	10	_ <u>5</u>	_35
Total requests	68	64	22	154

Once the President makes a declaration, FEMA has authority to spend funds for disaster assistance from the President's Disaster Relief Fund. In addition to the President's Disaster Relief Fund, FEMA can call upon other Federal agencies to provide disaster assistance with or without reimbursement to the agencies from the President's Fund. Federal agencies can also provide assistance under their own authorities.

The table below identifies estimated President's Fund requirements for major disasters and emergencies declared for fiscal years 1979, 1980, and 1981 through April 30.

	1979	1980	1981	Total
			(7 months)	
	AND	(000	omitted)	
Major disasters Individual			•	
assistance Public	\$199,162	\$ 60,518	\$ 3,110	\$ 262,790
assistance	418,788	239,439	29,846	688,073
Total	617,950	299,957	32,956	950,863
Emergencies	29,894	a/233,487	2,467	265,848
Total	\$647,844	\$ <u>533,444</u>	\$35,423	\$ <u>1,216,711</u>

a/Of this amount, \$191 million is for the Cuban refugee emergency.

FEMA estimated that other Federal agencies, such as the Small Business Administration, Farmers Home Administration, and the Corps of Engineers, authorized loans or provided other assistance totaling \$1.6 billion. During this period, FEMA was authorized to spend \$21.4 million for administering the disaster relief program.

ORGANIZATION AND MANAGEMENT OF THE DISASTER RELIEF PROGRAM

FEMA's Office of Disaster Response and Recovery (DR&R) 1/is responsible for implementing the President's Disaster Relief Program. DR&R is headed by an Associate Director, who reports directly to the Director, FEMA.

DR&R staff are in each of FEMA's 10 regional offices. In May 1981, DR&R had 154 staff members, 64 at headquarters and 90 in the regional offices. When a major disaster or emergency request is received, regional personnel assess the damage and evaluate the need for Federal assistance. The region makes its recommendation to headquarters, which reviews the data and makes its recommendation to the President. When a request is granted, regional personnel coordinate response and recovery activities.

^{1/}On June 5, 1981, after the completion of our review, FEMA announced the first step in reorganizing the agency. The organization discussed in this report is that which existed at the time of our review.

DR&R augments its permanent staff with "reservists" who are employed by the region. These reservists are disaster assistance specialists who assist DR&R in carrying out its responsibilities at the disaster site.

OBJECTIVES, SCOPE, AND METHODOLOGY

We initiated this assignment to address concerns arising from previous GAO reviews regarding the disaster declaration process and FEMA's role in making recommendations to the President. This issue is important because of the substantial Federal payments which can result from this process. The review objectives were to determine the type and amount of information FEMA obtains on major disaster and emergency requests and to evaluate the criteria it used to make recommendations for declarations and denials.

Our review was conducted from April 1980 through May 1981 primarily at FEMA headquarters in Washington, D.C. We also reviewed records and interviewed officials in FEMA's Atlanta Regional Office. We interviewed the State Deputy Director of Civil Defense in Atlanta, Georgia, and the State Director, Department of Civil Defense, in Montgomery, Alabama. We also discussed the disaster declaration process with officials of the National Governors Association, Washington, D.C., and obtained their views on establishing criteria for a declaration.

In February 1981, Congressman Steve Gunderson of Wisconsin requested that our Office determine whether FEMA was administering disaster assistance programs consistently, effectively, and according to congressional intent. In this regard, the Administrator, Division of Emergency Government, Madison, Wisconsin, provided us with certain documents and records. We discussed with Congressman Gunderson his specific questions about the disaster assistance program and advised him that this review and our ongoing review of Federal disaster assistance provided to State and local communities would address his concerns.

Senator Edward Zorinsky expressed his support for this reviewand voiced his concern regarding FEMA's cost-sharing policy of reimbursing State and local governments for only 75 percent of public assistance costs. We advised Senator Zorinsky that this question would be addressed in our report.

We reviewed the Disaster Relief Act of 1974 (Public Law 93-288), related FEMA regulations, and obtained legal opinions from our Office of General Counsel on several issues.

We analyzed disaster records and statistics to identify important areas and issues for further consideration. We made comparative analyses by regions and States and by similar types of disasters, locations, time periods, and dollar size. From these analyses, we selected and reviewed 24 major disasters, 8 emergencies, and 9 requests which were denied. These reviews involved 26 different States and 9 FEMA regions. Because large

major disasters, such as Mt. St. Helens, would need less locumentation to support a declaration, we concentrated our evaluation on the smaller disasters. Although 1 major disaster we eviewed required an estimated \$129 million from the President's mission required and 1 emergency about \$21 million, the emaining 23 major disasters averaged \$3.2 million and the relaining 7 emergencies averaged about \$262,000. (See app. I for list of major disasters, emergencies, and denials reviewed by AO.)

Some general criteria for evaluating requests are contained in the act. However, FEMA advised us that it had developed no idditional specific criteria for evaluating requests for assistance as each request is different and has to be subjectively evaluated on the information available. We analyzed the data contained in Governors' letters of request, regional assessments, and headquarters' reviews, in an effort to identify the unwritten policies, procedures, and criteria FEMA follows in making recombendations to the President. Regional records pertinent to our eview were contained in FEMA's headquarters' files. We provided written questions to FEMA on a number of its reviews of Governors' equests and obtained written responses for most of them.

In an effort to better understand the decisionmaking process, we did a statistical and computer analysis of the quantifiable lata on 96 of the 102 major disaster requests that were declared and denied in fiscal years 1979 and 1980. We made correlation analyses to identify those disaster factors which had the most afficient factors such as numbers of people injured, homes damaged, stimated eligible costs, and others. We made numerous multiple egression analyses to identify those declarations and denials which did not conform with the majority of these decisions. Appendix II describes our method and analyses in more detail.

CHAPTER 2

OPPORTUNITIES TO IMPROVE DATA GATHERING

AND DISASTER ASSESSMENTS

Federal assistance is supplementary in nature and to be provided only when the severity and magnitude of the incident is beyond the capabilities of the State and affected local governments to effectively respond. It is to be given only when the States have committed a reasonable amount of their funds to leviate the damage, loss, hardship, and suffering resulting from the incident.

Assessing the severity and magnitude of disasters and evaluating the need for Federal assistance quickly is a difficult task which involves making decisions with incomplete information. FEMA decisions are consistent where the severity and magnitude of disasters is concerned. But its decisions are not as consistent when evaluating data related to States' and local governments' capabilities and their commitments to handle the disaster. (See ch. 3.)

Standard forms and computer models, such as those developed by GAO, would improve FEMA's ability to gather data and assess the need for Federal assistance.

ASSESSING NEED FOR FEDERAL ASSISTANCE

It was the Congress' intent to provide supplemental assistance to State and local governments to help (1) alleviate the damage, loss, hardship, or suffering caused by a major disaster, (2) save lives and protect property and public health, and (3) maintain safety in the event of an emergency.

FEMA's internal guidelines state that the Disaster Relief Act, prior disaster legislation, legislative history, and experience all provide some direction but do not define the parameters of a major disaster. A principal component in FEMA's assessment is a determination that a disaster is of such severity and magnitude that effective response is beyond the capabilities of State and local governments and that Federal assistance, authorized by the act or by other Federal programs triggered by the act, is required.

A key problem for FEMA is measuring severity and magnitude. For evaluation purposes, FEMA's objective is to quantify it in terms of damages and losses, which are further related to specific actions required to alleviate hardship and suffering. FEMA personnel were advised to measure severity and magnitude by considering (1) what the State, local governments, and individuals will have to do if a declaration is made and (2) what the impact will be on the State, local governments, and individuals if a major disaster is not declared.

FEMA's ultimate objective is to determine the "unmet needs" for which the Federal Government can provide assistance and the impact which the disaster has on those affected by it. FEMA sees each disaster as being unique and, therefore, needing to be evaluated on its own merits.

PROBLEMS IN REVIEWING FEMA ASSESSMENTS

A Governor's request to the President for a major disaster or emergency declaration is sent to the appropriate FEMA Regional Director. This request contains, among other things, the State's assessment of damages and losses and the actions being taken to overcome them. Regional personnel visit the scene of the incident to make a first-hand evaluation of the damage. Based on this review, the Regional Director makes a recommendation to FEMA head-quarters and the FEMA Director recommends a course of action to the President.

For reporting to headquarters, FEMA has developed a regional disaster/emergency summary for the gathering of data about the incident and a separate regional analysis and recommendation for opinions and evaluations. The summary provides information on the date and type of request and locations and probable incident period and an assessment of severity, magnitude, and response capabilities of State and local governments and private organizations. The assessment section includes such factors as numbers of casualties (dead and injured), number of homes damaged and destroyed, numbers and types of businesses and farms affected and related damage estimates, and impact on public facilities. These reports are reviewed by headquarters personnel in DR&R.

To better understand the damage assessment and evaluation process performed by FEMA, we selected a sample of requests that resulted in 24 major disaster declarations, 8 emergency declarations, and 9 denials. We made a detailed review of the requests and analyses of the facts, conclusions, and recommendations contained in FEMA's reports.

We found it difficult to evaluate the decisions on individual requests or on different requests which appeared to us to be similar in size, scope, time, or other circumstances. Each request had different circumstances, although the basic types of information were similar. Governors' letters presented the information in a variety of ways. Many regional disaster assessments did not always present the information in a logical, uniform manner, and subjective opinions and conclusions were made on an overall basis without specific reference to the data on which they were based.

Many cases that we reviewed resulted in questions for which we could not find answers in the files. We requested in writing that FEMA supply written replies to our questions. Those which FEMA did answer or explain were based on opinions, recollections, and undocumented information which we could not verify. The results of our analyses of individual requests are discussed on pages 23 to 31.

STATISTICAL ANALYSIS INDICATES CONSISTENCY IN FEMA DECISIONS

Because of the difficulties we encountered in reviewing requests, we undertook a detailed statistical analysis of more cases in an effort to discover the bases for FEMA's decisions in granting or denying assistance and to determine whether a more objective approach could be taken in making disaster assessments. If we could identify FEMA's criteria, we also wanted to evaluate the extent they were consistently applied.

Method used

We selected 96 major disaster requests received in fiscal years 1979 and 1980 as our data base. 1/ We identified about 30 factors for these cases, such as number of people killed and injured; number of homes damaged and destroyed; and the dollar value of homes, businesses, and farms damaged and destroyed. Data on some of these factors was often not available or was ambiguous so we had to interpret some of the data. For example, when no information existed on the number of people injured or homes destroyed, we assumed none were. On the other hand, some obviously large disasters had no data on the dollar estimate of eligible costs. For this type of missing data, we used recent FEMA cost estimates. In addition to data from the files, we also used published preliminary 1979 data on per capita income and State operating funds as indicators of the State's capability to handle the disaster on its own.

We were unable to identify data on many individual factors in enough cases to use in our analyses. Many cases, for example, did not provide estimates of the cost of business damage or the cost of agriculture damage so we could not use them. As a result, we were limited to using the estimated cost of total damage and the other factors discussed in this report. See appendix II for more information on the data base and how we handled the problem of missing data.

Two methods were used to analyze the relationship between FEMA's decisions and the factors identified for the disasters. First, we attempted to identify differences between declared and denied decisions in terms of different individual factors. Second, we used more sophisticated statistical techniques to develop models of the relationship between several factors working in combination with FEMA's decisions. These are probability models that can identify past decisions that were not consistent with the majority of the decisions made and can predict how FEMA would decide a current request based on past decisions. See appendix II for more details on these models.

^{1/}During the period, a total of 102 major disaster requests were received. To preclude duplication in our analyses, we excluded six requests for reconsideration of denials because they contained no new information.

Factors influencing FEMA decisions

Factors relating to disaster severity and magnitude, such as the total estimated cost of eligible assistance, number of people injured, and type of request, seem to influence FEMA's decisions. The impact on FEMA decisions of other factors, such as States' capability and commitment, are not as clear.

Estimated cost of eligible assistance

The higher the estimate of eligible costs, the greater the chance of a request being granted. The average cost in 96 applications was \$7.2 million, ranging from about \$100,000 to \$177.5 million. The average cost in declared disasters was \$9.83 million, while it was only \$1.12 million in denied disaster requests.

Table 1 shows the distribution of estimated eligible cost by type of decision. For example, only 45 percent of the requests involving up to \$1 million were declared, while 100 percent of the requests for \$5 million or more were declared.

Table 1

Requested amount	Declared D	ecision Denied	Total	Percent of Declared	total Denied
(millions)					ŀ
\$09 1-1.9 2-2.9 3-4.9 5-8.9 9 and above	13 9 8 13 10 14	16 7 4 2 0	29 16 12 15 10 <u>14</u>	45 56 67 87 100	55 44 33 13 0
Total	<u>67</u>	29	96		

FEMA's Director contends that we are not entirely correct in stating that the higher the estimate of eligible costs the greater the chance of a request being granted. He said that the statement would generally be true for the same State and type of catastrophe and under similar circumstances.

FEMA suggests that we take more directly into account the influences of several factors working in combination with each other. It is true that table I analyzes only the influence of estimated cost of eligible assistance. However, when we used more sophisticated models to determine the relationship between several factors working in combination with FEMA's decisions (see p. 15.), the result was that the estimated cost of eligible assistance still had a significant influence on the decision to declare or deny a major disaster request.

Number of people injured

Generally, the more people injured, the greater the chance of a disaster being declared. The average number of people injured for all requests was 27, 37 for declared requests, and 1 for denied requests.

Table 2 shows the distribution by number of people injured. There were 51 requests that did not report any injuries, 57 percent of these were declared. On the other hand, all requests reporting 50 or more injured were declared.

Table 2

Number of people		ecision		Percent o	of total	
injured	Declared	Denled	Total	Declared	Denied	
0	29	22	51	57	43	
1-49	23	7	30	77	23	
50-99	8	0	8	100	0	
100-199 200 and	5	0	5	100	0	
above	_2	_0	_2	100	0	
Total	<u>67</u>	29	96		1	

Homes damaged

The decision is not affected when the number of homes damaged (major damage, minor damage, or completely destroyed) is less than 200. However, a disaster is more apt to be declared if the number of homes damaged is greater than 200. Table 3 shows the distribution of homes damaged by type of decision.

Table 3

Number of	D	ecision	Percent of	total	
homes	Declared	Denied	Total	Declared	Denied
0	11	12	23	48	52
1-49	6	6	12	50	50
50-199	7	8	15	47	53
200-799 800 and	21	3	24	88	12
above	<u>22</u>	_0	22	100	0
Total	67	29	96		

Type of request

The chance of a request being declared or denied is closely related to the type of assistance requested—individual assistance, public assistance, or both. Requests for both types of assistance have the greatest chance of being declared, while requests for only public assistance have the least chance of being declared. Requests for only individual or only public assistance received only the kind of assistance requested. Requests for both types of assistance received either both or individual assistance only, but seldom received public assistance only. Table 4 shows the distribution of type of assistance requested by type of decision.

Table 4

Type of assistance		Decision	Percent of total		
requested	Declared	Denied	Total	Declared	Denied
Individual Public Both	3 1 <u>a/63</u>	5 11 <u>13</u>	8 12 7 <u>6</u>	38 8 83	62 92 <u>17</u>
Total	<u>67</u>	29	<u>96</u>	<u>70</u>	30

a/Of the 63 declarations that requested both types of assistance, 22 were declared for individual assistance only, 3 were declared for public assistance only, and 38 were declared for both individual and public assistance.

State capability

We used State general operating funds and per capita income as measures or indicators of a State's capability to financially handle its disaster. We expected the chance of a major disaster declaration to be greater for those States where these indicators of capability were smaller. However, we found little difference between average State operating funds and FEMA's decision to declare or deny disasters.

Table 5 shows the distribution of requests from States according to their per capita income. Nothing clearly indicates how per capita income influenced FEMA decisions. States in the lowest per capita income category had a greater chance of their request being approved than States with the highest income. But, for the bulk of requests from States in the midranges, increases in per capita income slightly increased the chances of approval.

Table 5

Per capita income	Declared	Decision Denied	Total	Percent of Declared	total Denied
(thousands)	•	•			
\$1-4.9 5-6.9	3 10	0 5	3 15	100 67	0 33
7-7.9 8-8.9 9 and abov	15 24 7e <u>15</u>	6 9 <u>9</u>	21 33 24	71 73 63	29 27 37
Total	<u>67</u>	<u>29</u>	<u>96</u>		

State commitment

We looked at two indicators of a State's commitment to disaster assistance. One measure was the amount of State and local government funds the Governor said would be committed to the disaster. The other was whether the Governor properly certified that these funds would be available. We found little, if any, difference between the averages for these factors for declared or denied disaster requests.

Table 6 shows the distribution of requests by commitment statements and by type of decision. There were 63 requests from States whose Governors did make the required commitment statement and 33 requests from States whose Governors did not make the required commitment statement. Equal percentages of these requests were declared. This indicates that the presence or absence of a commitment statement had no definite impact on the final decision.

Table 6

Made commitment	Decision			Percent of	total
statement	Declared	Denied	Total	Declared	Denied
Yes	44	19	63	70	30
No	<u>23</u>	10	<u>33</u>	70	30
Total	<u>67</u>	<u>29</u>	96		

FEMA's Director noted that for some disasters in the past, a declaration was made with the expectation of working out the specific State commitment and including it in the Federal-State agreement. However, he said these instances were rare and generally limited to situations where immediate Federal assistance was required.

FEMA's comment implies that our use of Governors' letters as a basis for our analysis may have resulted in our overlooking some State commitments. Our analysis was based on whether the Governor fulfilled the statutory predeclaration requirement and certified as to State and local government commitments. If we included those commitments made after-the-fact in our analysis, the results should not change significantly because, as FEMA indicates, the number of instances was rare.

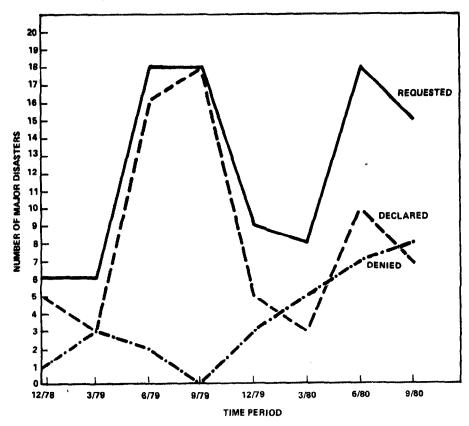
Time period

The relationship between when the decision was made and the type of decision is not entirely clear. Figure 2 shows the number of disasters declared and denied for each quarter of fiscal years 1979 and 1980. Toward the end of fiscal year 1979 declarations increased, perhaps indicating more severe weather conditions or a more liberal administration policy. Denials increased thereafter, perhaps indicating less severe weather conditions, a shortage of Federal funds, or a more conservative administration policy.

In our regression analyses, time was used as a proxy for inflation. See discussion in appendix II, page 47.

FIGURE 2

MAJOR DISASTER DECLARATIONS REQUESTED, DECLARED, AND DENIED



Political influence

We performed a limited analysis of the relationship between the decision and the political party in power in each affected area. We compared the political parties of the Governors, Senators, and Representatives of the affected areas with the decisions to declare and deny disaster requests.

Except for State Governors, we could find little, if any, indication that political factors influenced the outcome. Table 7 shows the distribution of the Governors' political affiliation by type of decision. On the surface it looks like the opposition (Republican) party had a better chance of having its requests granted.

Table 7

Governors' political		Decision	Percent of	total		
<u>affiliation</u>	Declared	Denied	Total	Declared	Denied	
Democrat Republican	41	23 6	6 4 28	6 4 79	36 21	
Other or missing	4	_0	4	100	0	
Total	<u>67</u>	<u>29</u>	<u>96</u>			

Influence of combining factors

The analysis up to this point has looked at the impact of each factor individually. In practice, FEMA subjectively evaluates each request on the basis of combinations of factors. To evaluate this combined effect, we used a statistical technique called regression analysis.

Using data from 96 requests and regression analyses, we developed mathematical models that estimate the relationship between the decision and various combinations of factors, such as people injured, homes damaged, and State per capita income. The models can also be used to assist in the evaluation of new requests. New information could be entered into the formula, and it could then be used to predict the probability of the request being granted. Additional nonquantifiable data could then be used to make the final decision. (See app. II.)

We developed six different models using different combinations of factors, as shown in table 8. Some models appear to have better predictive power than others, as noted by the percentage of decisions that the model agreed with the FEMA decision. In general, the models support the inferences one would draw from the previous tables. The models indicate that the estimated eligible cost in dollars, in combination with number of homes damaged and number of people injured, are positively associated with the decisions. The higher their values the greater the chance a request will be approved. Requests for combination of

both individual and public assistance have the best chance of being declared. Month of decision and per capita income are negatively associated with FEMA's decisions. For example, as per capita income increases, the chance of a request being approved decreases. Also, there appears to be little, if any, relationship between State commitment and the decision.

Table 8

Variables Used in Regression Models

				1		1
	******	ľ	Model	Number		
	<u>1</u>	2	<u>3</u>	4	<u>5</u>	<u>6</u>
Variables:						
Type of assistance requested	X	x	X	x		x
Estimated eligible cost	X	· X	X	X	X	×
Number of people injured	X	x	X	X	X	x
Number of homes damaged	x	x	x	x	x	X
State per capita income	X	X	X	X	X	X
Decision month	x				x	x
State commitment	x		x		X	x
Interaction term with several variables	X	X				
Number of cases used	96	96	96 <u>a</u>	<u>1</u> /87 <u>b</u> /	67	<u>c</u> /20
Percent of cases agreeing with FEMA decision	85	86	83	83	81	95

<u>a</u>/Deleted nine very large disasters with missing values for selected variables.

b/Includes only requests for both individual and public assistance and deletion of nine large disasters.

c/Includes only requests for individual or for public assistance.

The models were useful in providing insights about FEMA's implicit decision criteria and the extent that FEMA applied the criteria consistently.

Since FEMA seems to be more willing to grant certain types of assistance than others, we tried to capture this additional factor in other statistical models. These models focused primarily on the type of assistance granted and were also used to identify cases where FEMA may have made inconsistent decisions.

The six original models plus these additional models identified 20 decisions where FEMA may have applied the criteria inconsistently. FEMA approved seven requests which our analyses predicted would have normally been denied. Conversely, FEMA denied 13 requests which our analyses predicted would have normally been declared. Part of the reason for these differences could be due to the limitations of our analyses or the data used.

Our further analysis of the quantifiable data related to these 20 decisions disclosed 8 decisions which were very inconsistent with the majority of FEMA's decisions. Table 9 lists these decisions and compares the values of key indicators for each type of assistance granted or denied. The first five requests which were declared generally had less than average values for three key indicators of disaster magnitude—estimated eligible costs, homes destroyed, and people injured. In three of these requests, the per capita income—an indicator of financial capability—is higher than the average. FEMA also denied three requests for which the estimated eligible costs, homes damaged, and people injured were generally higher than the average. Only one of the denials had per capita income higher than the average.

We cannot judge whether FEMA made improper decisions in any of the requests. Our review of the records for the 20 decisions with which our models disagreed disclosed a variety of subjective reasons for FEMA's final decisions. While many FEMA decisions appeared to be proper, some were not as clearcut because each decision was based upon various criteria that were not uniformly applied. One request for public assistance, for example, was granted because the disaster had weakened State and local fiscal resources so that it lacked the ability to respond to other emergencies in the foreseeable future. While we do not question the validity of this particular declaration, we did note that such forward thinking was not applied to any of the other requests that we reviewed.

Table 9 Inconsistent FEMA Decisions Identified by GAO Model

		Type of assistance	Estimated eligible cost		Number of homes damaged and destroyed		Number of people injured		Per capita income	
	Decision number	granted or denied	Average for this type	For this decision	Average for this type	For this decision	Average for this type	For this decision	Average for this type	For this decision
	(millions)									
18	3	Public	\$ 5.90	\$.61	483	40	. 13	4	\$7,775	\$5,000
	6	Public	5.90	4.86	483	555	13	0	7,775	9,353
	9	Individual	3.98	. 44	1,092	450	22	0	8,105	7,477
	23	Both	14.09	2.00	858	312	50	0	7,728	8,775
	24	Public	5.90	10.80	483	0	13	0	7,775	9,269
	27	Denied	1.12	1.35	73	334	1	3	8,227	9,055
	30	Denied	1.12	1.43	73	251	1	0	8,227	7,185
	46	Denied	1.12	1.67	73	93	1	3	8,227	8,226

CONCLUSIONS

In assessing the impact of a disaster, FEMA seeks to quantify severity and magnitude in terms of losses and damage, determine what resources are available from others to cover the losses and damage, and arrive at the unmet needs which would be eligible for assistance from FEMA. If the unmet needs are causing undue hardship and suffering to individuals or governments, a disaster declaration is warranted.

For the most part, FEMA is consistent in determining the severity and magnitude of a disaster, even though it does not always have complete information documented in a uniform manner. Complete information on damages and losses is understandably difficult to obtain because of the nature of the circumstances under which they are obtained. On the other hand, some of the missing information may have been overlooked or ignored. The lack of uniformity in Governors' letters and regional damage assessments contribute to such a problem.

The best means for FEMA to assure that it receives all the available information in the shortest possible time is to develop a uniform format to supplement the information now provided by State and local governments and regional offices and require that they be used consistently. This uniform format could include provisions for all the specific damage and loss data which FEMA needs. Since estimated eligible costs seem to be strongly associated with the decision, these estimates should be given particular attention. Also, the formats could provide for Governors to support their statements on capability and commitment.

With more complete and uniform information, FEMA could develop computer models such as those we developed in this review. This tool would be useful as a guide to future decisionmaking and serve as a record for management evaluation.

RECOMMENDATIONS

We recommend that the Director, FEMA:

- --Develop comprehensive, uniform forms to be used by Governors when submitting their requests and by regional offices when performing damage assessments.
- --Use computer models, such as those developed by GAO, as a tool for program decisionmaking and evaluation.

AGENCY COMMENTS AND OUR EVALUATION

The Director, FEMA, informed us that FEMA would consider developing comprehensive, uniform damage assessment forms during its current revision of the regulation relating to the declaration process. Shortly after receipt of the Director's comments, FEMA established a plan for considering this recommendation which it expects to complete by July 1, 1982. We have no basis for

evaluating the Director's response to our recommendations and the FEMA plan until the regulation has actually been issued.

The Director did not agree to use computer models as a tool for program decisionmaking and evaluation. He said that the use of a computer model may have some merit in the evaluation of certain aspects of the Disaster Relief Program, but that its use in decisionmaking with regard to disaster requests is severely limited. He said there is no proper way to quantify key factors such as hardship, suffering, and impact for use in a decision—making computer model. Subsequent to this reply, FEMA decided to have a consultant review its computer applications and recommend appropriate changes. It expects to complete this action by October 1, 1982.

We do not suggest that the use of computers models would supplant the judgment of agency officials in assessing the hardship and suffering or the impact of a disaster. On the other hand, we believe that using computer models can be an extremely effective tool for program evaluation and management control.

Each disaster file is handled on an individual, ad ho¢ basis, without formal reference to the circumstances or experiences and lessons learned in the evaluation of prior disasters. Consequently, program evaluators only consider the factors associated with the current incident. Problems discussed throughout this report about missing data and the lack of consistency in the quality and methodology of disaster assessments indicate a need for more uniformity in disaster evaluations. By using computer models, FEMA could develop formulas which would enable it to predict whether a current incident would be declared a disaster based on past experience. Such information would help FEMA judge the current incident. Also, if the data related to the disasters were computerized, FEMA would have the ability to search its prior disaster records to identify similar disaster situations and circumstances and enable it to compare the similarities and differences before making judgments on a current disaster request. Such model analyses and disaster comparisons could be presented to the Director, FEMA, for consideration in making a recommendation to the President.

Our use of computer models dealt primarily with the quantifiable factors associated with the severity and magnitude of disasters in an attempt to evaluate FEMA's past decisions and identify the implicit criteria used in the decisionmaking process. If FEMA used a similar approach, it may eventually find that some of the data it gathers has little influence on its decisions or that its decisions seem to be based on other factors not included in the computer model. Thus, it could refine its data-gathering techniques and more clearly establish the criteria it implicitly uses in its decisionmaking process. These models could also be expanded to include information pertaining to the capability of State and local governments and their related commitments. And, as experience is gained, and the usefulness of

the models increases, some measures of hardship, suffering, and impact might eventually be developed.

Finally, various management reports could be developed for the Director, FEMA, and other officials which would provide them with better management control over the operations of the disaster assistance program office.

CHAPTER 3

IMPROVEMENTS SHOULD BE MADE IN EVALUATING

THE ABILITY OF STATE AND LOCAL GOVERNMENTS

TO HANDLE MAJOR DISASTERS AND EMERGENCIES

Improvements in FEMA's evaluation process should be made even though it is faced with a difficult task of obtaining adequate information under the stressful conditions existing in a natural disaster. FEMA should obtain certain uniform information regarding a disaster to speed up and improve the quality and consistency of its decisionmaking. Formal guidance to State and local governments is minimal. FEMA's published regulations regarding procedures for requesting major disaster or emergency assistance essentially restate the law; require little additional information; and do not reveal the policies, procedures, and practices used by FEMA to evaluate the information.

FEMA's methods of evaluating State and local governments' ability to handle major disasters are not clearly defined and are not uniformly followed. FEMA assesses the severity and magnitude of the event, the capability and commitment of State and local governments, and then makes its recommendation to the President. These assessments vary greatly as to the type, quality, and degree of information used to reach the decision. Furthermore, FEMA does not document oral information, such as telephone conversations and evaluation meetings, which are important inputs to decisionmaking.

The lack of consistency in the quality and methodology of disaster assessments and the lack of knowledge by outsiders as to FEMA's methods of evaluation can create doubt as to whether the Federal Government is only providing supplemental assistance and whether each request is judged in a fair and equitable manner. Better advanced planning and the issuance of uniform policies and procedures would alleviate the problem.

LIMITED GUIDANCE FOR STATE AND LOCAL GOVERNMENTS

Numerous Federal programs become available to States when a major disaster or an emergency is declared. The Congress did not intend for the Federal Government to assume a unilateral role in responding to such occurrences. To the contrary, the act's purpose is to assist "State and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from such disasters." (42 U.S.C. 5121(b), (1976 ed.))

The procedures for obtaining Federal assistance, as outlined in the act, are as follows:

--The Governor of the affected State shall request a major disaster or emergency declaration by the President.

- --The Governor's request shall be based on a finding that the major disaster or emergency is of such severity and magnitude that effective response is beyond the capability of the State and the affected local governments.
- -- For major disaster requests, the Governor shall also:
- 1. Take appropriate action under State law and direct execution of the State's emergency plan.
- 2. Furnish information on the extent and nature of State resources which have been or will be used to alleviate the condition of the disaster.
- 3. Certify that for the current disaster, State and local government obligations and expenditures will constitute the expenditure of a reasonable amount of their funds for alleviating the damage, loss, hardship, or suffering resulting from such disaster. Additionally, State commitments must be a significant proportion of the State and local government obligations and expenditures.
- --The prior expenditure of funds is not a prerequisite for emergency requests, but the Governor is still required to:
- 1. Furnish information describing State and local efforts and resources which have been or will be used to alleviate the emergency.
- 2. Define the type and extent of Federal aid required.

For major disasters, FEMA's regulations require that Governors' requests include (1) an estimate of the amount and severity of the damage, broken down by type, such as private nonagricultural, agricultural, and public, (2) a statement of actions pending or taken by the State and local legislative and governing authorities with regard to the disaster, (3) a certification as to the amount of State and local government expenditures and obligations that will be used which will not require Federal reimbursement, (4) an estimate of the extent and nature of Federal assistance and funds needed for each disaster-affected area, and (5) other appropriate justifications in support of the request.

For emergency requests, the Governor is required to describe the State and local efforts and resources which have been or will be used for which no Federal funding will be requested. The request must also define the particular type and specific extent of Federal aid required.

The Governor of the affected State is responsible for complying with these provisions of the law and implementing regulations. Likewise, FEMA is responsible for obtaining sufficient, physical and financial information so that it can make an informed recommendation to the President. Unfortunately, FEMA's regulations do little to clarify and explain the law nor do they

provide information to Governors as to the factors FEMA uses and considers when it evaluates the States' capabilities and commitments. Consequently, Governors are unable to predict the outcome of their requests with any degree of certainty. This is partly evidenced by the fact that 64 Governors' requests, or 42 percent, have been denied since the beginning of fiscal year 1979.

EVALUATION OF THE CAPABILITY AND COMMITMENT OF STATE AND LOCAL GOVERNMENTS NOT CONCLUSIVE

By law, Federal disaster assistance is intended to be supplementary in nature. It should be provided only when the severity and magnitude of a major disaster or emergency is beyond the capabilities of the State and affected local governments to effectively respond and when they have committed, for major disasters, a "reasonable" amount of their funds to alleviate the damage, loss, hardship, or suffering. Capability is a crucial determinant because many States may be able to respond to very severe disasters, whereas other States may not be able to respond to lesser disasters. Capability can also be a crucial determinant in judging the reasonableness of the dollar value of commitments which State and local governments are required to make.

The bases for, and supporting documentation of, FEMA's determinations of State and local capability and the reasonableness of their commitments are often not conclusive. FEMA does not require strict adherence to the requirements of the act and it does not require complete and uniform information for measuring capability or for determining the reasonableness of commitments. The type and quantity of information obtained on capability and commitment varies from request to request and, thus, leads to considering different information for decisionmaking.

FEMA does not always require Governors to comply with legal requirements

The act requires Governors to follow certain specified procedures as a prerequisite to obtaining Federal disaster assistance. These procedures were established to ensure that Federal assistance was supplementary to State and local disaster assistance and that States were making good faith efforts to do what they could to alleviate the damage, loss, hardship, and suffering. Governors in many cases are not providing sufficient information, and FEMA is not requiring such information to make basic determinations relating to capability and commitment.

Our analysis of 96 major disaster requests in fiscal years 1979 and 1980 disclosed that almost one-half of the requests did not contain (1) the required statement of finding by the Governor that the disaster was of such severity and magnitude that it was beyond the capability of State and local governments, (2) a certification by the Governor that State and local commitments were a reasonable amount of available funds, or (3) either statement. The requests granted and denied are as follows:

•	Governor did not make required statement					
•	Beyond <u>capability</u>	Reasonable commitment	Both missing	Total		
Major disasters granted			٠.	•		
Fiscal year 1980 Fiscal year	4	6	1	11		
1979	_6		<u>6</u>	20		
Total	<u>10</u>	14	7	31		
Major disasters denied						
Fiscal year 1980 Fiscal year	3	2	7	12		
1979	_1	_1	_0	_2		
Total	_4	_3	_7	14		
Total	14	<u>17</u>	14	45		

Our computer analysis as to the importance of the presence or absence of these statements revealed that they did not have a significant influence on FEMA's final decision. This was further supported by our indepth review of 31 major disaster declarations and denials, 8 of which lacked a capability statement and 5 of which lacked a commitment statement.

Capability

These requests usually contained no comments whatsoever regarding State and local capability or they only emphasized the need for Federal assistance. For example, in one request that was approved, the Governor said "It is my judgment that Federal assistance is necessary to supplement the State and local efforts * * * * "

FEMA officials told us that the fact that State and local governments could not adequately respond to the situation was implicit in the Governor's statement. FEMA told us that although the Governor did not employ the precise wording of the law, his request certainly evinced an understanding of the spirit of law and legislative intent.

In another request, the Governor said:

"In my judgment, Federal assistance is necessary to effectively alleviate the conditions caused by the disaster. Legislative bodies of the affected areas (4 counties) are considering all ways of coping with the financial problems involved."

The Governor made no statement whatsoever regarding State capability, although it is one of the most affluent States in the Nation. In this case, FEMA concluded that one county did not have the capability to handle the disaster and it was granted Federal assistance. FEMA told us that, based on telephone conversations between headquarters and the region, it determined the State would not be able to provide an effective response to the unmet needs in one of the four counties involved, but the rationale for this decision was not documented.

An Assistant General Counsel, FEMA, said it was impermissible to declare a major disaster if the Governor does not certify that the situation is beyond the capabilities of the State and local governments.

Commitment

In these requests the Governors generally described State and local efforts being made and actions being taken to alleviate the disaster situation. And, even when a dollar commitment was mentioned, the Governors did not always certify that it was a reasonable amount of available State and local government funds. For example, one Governor said that 200 State employees and numerous crews from the county, the district, and contractors were working on the disaster and that certification of expenses incurred for this disaster would be transmitted as soon as possible. FEMA's regional office reported that the State legislature had recently enacted the fiscal year budget without providing funds for disaster assistance and that the State's expenditures had been insignificant. The required certification by the Governor was not in FEMA's files so we asked FEMA to explain the bases for recommending this major disaster request which was declared. FEMA told us that its

"* * * declaration letter stipulated 75/25 cost sharing of eligible public assistance and this was considered an adequate commitment on the part of the State and local governments."

State commitments must be significantly proportional

The act requires that State commitments be a significant proportion of State and local government obligations and expenditures. FEMA cannot possibly determine whether State commitments are significantly proportional when commitments (1) are only

described as significant, (2) do not specify obligations and expenditures of local governments, or (3) include a total amount not identified to either the State or local government. For example, one Governor who requested Federal assistance only certified that State and local governments would make reasonable expenditures and obligations consisting of State and local efforts for public safety, rescue, removal of debris, and the State's share of the individual and family grant program. He included no dollar estimates for these expenditures.

Regarding this Governor's certification, the FEMA region reported that it had requested additional information estimating the monetary value of State assistance. The region said this information was not available from the State at that time and, if required by headquarters, it would be provided later. However, based on its inspection and past experience with State operations, the region concluded that the State would continue to provide all available State resources in recovery operations. Federal assistance was provided even though FEMA did not have the required information on State and local commitments.

One year later this same Governor made similar statements regarding State and local government commitments for another disaster without specifying details on the commitment. FEMA estimated that this commitment would amount to \$115,000 based on the estimated cost for debris removal and emergency protective measures. Although FEMA did not determine the proportion of State and local government commitments, Federal assistance was granted.

The Director said that corrective action has been taken and that FEMA is insisting that legal requirements are complied with when a request is made. In this regard, the weekly Director's Memorandum dated February 27, 1981, issued to headquarters and regional personnel, contained the following policy statement:

"1. On receipt of requests from Governors for Presidential declarations under PL 93-288, carefully review the requests to ascertain that the request complied with the requirement for certain essential elements of information such as State and local commitment or implementation of the State emergency plan (for major disasters). Where such required actions are not included in the request, it should be noted in the acknowledgement to the Governor and the State advised to furnish the information in order to preclude a delay in processing."

This matter will also be considered when FEMA revises its regulation on the Declaration Process.

Analysis and evaluation of capability and commitment data is inadequate

FEMA does not use the same type of information for (1) measuring the capability of State and local governments and (2) assessing the reasonableness of their commitments. Each request is analyzed and evaluated on different bases and, thus, there is no assurance that each major disaster and emergency request is considered in a fair and equitable manner. We recognize the need for FEMA to act quickly when a disaster occurs. However, this situation could be remedied if FEMA makes States aware in advance of the kinds of information it needs to perform complete and uniform evaluations and consistently requires the States to provide the information.

Governors generally provide much of the information required by the law and regulation, but they do not provide much of the information FEMA uses in its evaluation. They usually describe State and local efforts by identifying the various departments and agencies whose personnel and equipment have been used to respond to the incident and assist individuals, evacuate citizens, remove debris, and perform emergency protective measures. These efforts are known as "soft match," since the salary and equipment costs would normally not have exceeded the cost of regular operations. Soft match is not usually quantified in terms of dollars spent. Governors usually identify the type of State and local work which has been done or will be done and the amount of funds spent or to be spent for which no Federal reimbursement will be requested.

Some Governors also voluntarily provide additional information regarding State and local financial conditions, general economy of the affected area, and prior disaster history.

Although FEMA believes each disaster request must be subjectively evaluated on its own merit, it did develop an internal paper in 1975 on the "Logic of Evaluating Requests for Declaration of a Major Disaster." To measure capability, FEMA's objective is to determine what State and local governments can do or have the ability to do. The paper suggests considering a States' (1) authority to spend funds, (2) financial conditions, (3) general economy--income, unemployment, etc., and (4) prior The paper also suggests considering location disaster history. and concentration of damage. To evaluate the reasonableness of commitments, FEMA's objective is to determine whether the State and local government response is commensurate with the severity and magnitude of the incident and whether the State is playing an important role in the recovery effort. In this regard, the paper suggests considering (1) general economy, (2) impact of the incident on fiscal outlays, (3) fiscal outlays in recently declared and non-declared disasters, (4) authority to spend funds, (5) debt and borrowing limitations, and (6) bottom line or forced contribution.

In June 1981, headquarters advised the regions that their damage assessments were not uniform. Regions were instructed to review the "Logic" paper for guidance and were offered copies of the paper if it were not available in the regions.

We used these guidelines to determine the type and quantity of information FEMA actually uses to arrive at its decisions. FEMA uses the Governor's request and obtains whatever additional information that is readily available to make a decision. The Director informed us that for marginal cases, the FEMA national office requests additional information which may require field trips and research. Nevertheless, the following schedule shows the type of information FEMA considered in the 31 disaster requests we reviewed.

	Requests			
Type of information considered	Information provided by Governors	Information added by <u>FEMA</u>	Total	
Prior disaster history	14	10	24	
General economy	9	12	21	
Fiscal outlays in			1	
recent disasters	13	7	20	
Authority to spend funds	6	9	15	
Financial condition	7	7	14	
Impact of disaster				
on fiscal outlays	6	6	12	
Surplus	0	7	7	
Ability to spend funds Debt and borrowing	4	0	4	
capacity	0	1	1	

Note: FEMA declared 24 and denied 7 of these disaster requests.

The weight or influence which these factors have on FEMA's subjective decisions are impossible to determine. In some requests FEMA considered information on only one factor and in other requests FEMA considered information on several factors.

We believe that if FEMA is to evaluate requests on a fair and equitable basis, it must obtain the same type of information in every case and uniformly evaluate them. FEMA's decisions for declarations or denials may have been different if additional information factors had been considered in individual cases. For example, in one case FEMA based a denial, in part, on the fact that the State and local governments had debt and borrowing capacity. Had this factor been uniformly considered in all requests, other FEMA declarations might have been denials.

The financial conditions of States vary, with many States having large surpluses. Few Governors provide information on surplus funds in their requests. If they do, they usually advise that they do not have the authority to spend surplus funds for disaster relief. Some States also advise that they have no

authority or programs to aid their own citizens or their local governments. FEMA provides Federal assistance to States not having the authority to spend surplus funds or provide other assistance.

For example, FEMA denied a major disaster request because the State and at least one of the two affected counties had large surplus balances. The Governor protested FEMA's decision. He explained that he did not have the authority to spend surplus funds without approval from the State legislature. FEMA then recommended and the President declared an emergency and Federal assistance was provided. A week later the State legislature was to convene and could have authorized State assistance.

Surplus does not appear to be a valid and reliable measure of State capability since FEMA does not know whether it is accessible. Nevertheless, if State surplus is a factor considered by FEMA in reaching its subjective decision, then FEMA should uniformly consider this factor for all requests.

FEMA denies Federal assistance to States when it determines the request is primarily for "budgetary relief." In these requests, FEMA generally finds that much of the damage has already been repaired and that Federal assistance would essentially replace budgeted funds spent. Whether these budgeted funds had been earmarked for other essential public services that were foregone is not considered. Had the State and local government not proceeded and made the repairs, they would have had an unmet need and Federal assistance may have been provided. Such a practice penalizes those who take care of their needs in anticipation of Federal assistance. If this practice is valid, it should become a formal policy and made known to all States.

FEMA may deny part of a request for Federal disaster assistance if it believes the State or local government commitment is inadequate. For example, one Governor identified six departments of the State that had committed personnel and some equipment. He said,

"State and local efforts in response to this disaster have been and are presently continuing to be significant in the areas of debris removal, damage assessment, and recovery efforts. * * * Costs for these items and the indirect costs of managing the disaster recovery effort from the State and local funds are considered to be a significant contribution toward disaster costs for which no Federal reimbursement will be requested."

FEMA considered the State commitment to be totally unacceptable, but still granted Federal assistance to individuals and, ultimately, for limited public assistance. FEMA explained to us that it concluded that correcting the damage and loss to public facilities was within the capability of the State and local governments. Consequently, its denial of public assistance would force these governments to repair their own public facilities.

As such, this would constitute an increase in commitments which FEMA then considered reasonable. This practice is known as forcing a commitment. In our view, the Governor should be advised that the commitment is inadequate and be given an opportunity to increase it. Otherwise, the entire request should be denied.

FEMA's inability to obtain adequate and reasonable State and local government commitments is acknowledged by its adoption of a 75 percent/25 percent cost-sharing policy with regard to eligible public assistance costs. We found that this policy is consistent with the act, as discussed more fully in chapter 4.

STATES' FINANCIAL CAPABILITIES NEED TO BE ADEQUATELY ASSESSED

In August 1979, we reported on FEMA's reimbursement policies for snow emergencies (CED-79-97). 1/ We identified problems in FEMA's reimbursement policies and made several recommendations to correct these policies. FEMA has not resolved all of the problems. One unresolved problem concerns inequities in the Disaster Relief Act of 1974. Our report recognized that the way the act is implemented unfairly penalizes or rewards States applying for Federal reimbursements because of differences in State laws and States' preparedness to deal with major disasters and emergencies. We recommended that FEMA prepare a comprehensive analysis of the impact of these potential inequities on Federal disaster assistance and submit to the Congress a detailed plan and legislative changes to correct such weaknesses.

FEMA agreed that inequities exist in disaster relief because of differences in State laws, fiscal procedures, and flexibility in allocating funds. It agreed to conduct a study if directed by the Congress to do so.

The recommended analysis has not been undertaken. If this analysis had been undertaken, FEMA would now be in a better position to evaluate the capability of State and local governments and the reasonableness of their commitments. And, the problems discussed in this report may have been minimized.

FEMA said that our comments on budgetary relief (p. 31) are not consistent with the comments and recommendations made by GAO in its August 1979 report on FEMA's reimbursement policies for snow emergencies.

^{1/}The GAO report was actually directed to the Administrator of the Federal Disaster Assistance Administration, one of FEMA's predecessor agencies.

We requested that FEMA identify the specific comments and recommendations to which they referred. They identified several pages in our August 1979 report and informed us that throughout these pages we were insisting that States use all available resources before Federal assistance be provided.

We believe that FEMA has misinterpreted the message in both of our reports. That message is that FEMA is not adequately assessing the capability of State and local governments to respond to their own disasters and emergencies. Our August 1979 report contained comments, such as the following:

- -- "The act intends that Federal funds should not be disbursed to the extent that the State can use its legally available financial and physical resources."
- -- "The act requires that State and local governments will do all they are capable of doing in responding to show-storms before Federal assistance may be provided."
- -- "To the extent that States have the financial capacity to meet the demands of the snowstorm, they should not be eligible to receive financial assistance under the act."

Our August 1979 report also made the following recommendation:

--That FEMA "revise the snow removal reimbursement policy to better safeguard the President's Disaster Relief Fund by (1) ensuring that Federal reimbursements are not paid to States that can afford their own cost of snow removal, (2) reimbursing only the cost of those activities which the State could not have performed without Federal financial assistance, and (3) discontinuing to reimburse States for costs that would have been incurred without a snow-storm."

In discussing "budgetary relief" in this report, we referred to those situations where Federal assistance is denied to States who have, as an expediency, used budgeted funds from other sources for disaster assistance. This raises a question as to whether the States have used all "available" financial resources or whether they have gone beyond their own financial capability.

A major issue in both reports is that FEMA does not know what State and local government funds are available for disaster assistance and are, therefore, not adequately assessing the capability of State and local governments to handle their own disasters.

CONCLUSIONS

When a major disaster or an emergency occurs, FEMA needs to quickly evaluate the situation and determine whether a declaration should be made. FEMA reacts to the situation, obtains and considers readily available information, and makes its

recommendation to the President. However, FEMA does not always document the relevant factors considered in their decisions. Better advanced planning by FEMA and uniform policies, procedures, and guidelines would enable FEMA to speed the process while, at the same time, enable it to obtain more information and perform better analyses. This should also minimize unwarranted requests and the expenditure of Federal resources to evaluate the requests.

Not all Governors comply with the requirements of the act and regulations. As a result, FEMA frequently finds it necessary to work with incomplete information. FEMA should advise the States in advance as to the specific nature of these requirements and make it clear that future requests which fully comply with Federal laws and regulations will help avoid delays in processing their requests.

FEMA has made little effort to inform States fully on the policies, procedures, methods, and guidelines which it uses to evaluate requests. The disclosure of such information would enable State and local governments to better decide whether they had a valid request to make and provide them with knowledge of the types and amounts of information FEMA needs to make its decision.

Differences in State laws, fiscal procedures, and funding levels make it difficult for FEMA to assess States' capability and create inequities among the States in administering disaster relief.

RECOMMENDATIONS

We recommend that the Director, FEMA:

- --Reevaluate and improve FEMA's assessment criteria for evaluating major disaster and emergency requests.
- --Establish written policies, procedures, and guidelines to use when evaluating major disaster and emergency requests and publish them in the Federal Register. This should include (1) an explanation of FEMA's basic philosophy for evaluating capability and commitment, (2) an explanation of the use of evaluation factors, such as debt and borrowing capacity, surplus funds, prior disaster history, and (3) FEMA's positions on budgetary relief, forced commitments, and similar matters.
- --Require that Governors' requests include comprehensive information on the financial capability of the State, the availability of such resources under State law, per capita income, disaster trends, and similar factors to expedite FEMA's assessment of the level of capability each State could attain and to aid FEMA in evaluating the reasonableness of State commitments.

- --Make it clear that future requests which fully comply with Federal laws and regulations will help avoid delays in processing the requests.
- -- Require the documentation of all substantive discussions and evaluation meetings held by FEMA.

AGENCY COMMENTS AND OUR EVALUATION

The Director informed us that the first four recommendations are being given consideration in the development of a revised regulation on the Declaration Process. Shortly after receipt of the Director's comments, FEMA established a plan for considering all of the foregoing recommendations, with final regulatory action to be completed by September 30, 1982. We have no basis for evaluating the Director's response to our recommendations and the FEMA plan until the regulation has actually been issued.

The Director agreed that documentation of the basis for their final recommendation to the President, including a statement of relevant factors considered, is needed. However, he would not want the documentation process to impede the expeditious processing of the requests. We had spoken to the former Associate Director, DR&R, regarding this matter and he did not believe that such documentation would slow down the decisionmaking process.

RECOMMENDATION TO THE CONGRESS

As recommended to FEMA in August 1979, we recommend that the Congress direct FEMA to prepare a comprehensive analysis of the impact of potential State inequities on Federal disaster assistance and submit to the Congress a detailed plan and legislative changes to correct such weaknesses.

CHAPTER 4

THE CONGRESS NEEDS TO CLARIFY

DISASTER ASSISTANCE ISSUES

Two recent FEMA actions have raised serious concerns that it may have changed the scope of the Disaster Relief Act. First, in May 1980 FEMA adopted a general policy of requiring State and local governments to pay 25 percent of eligible public assistance costs. Second, disaster assistance has been provided for man-made events, such as the Love Canal chemical contamination and the Cuban refugee influx in Florida. Such assistance has stirred considerable controversy because many feel that these situations were not natural disasters covered by the act.

FEMA COST-SHARING POLICY IS CONSISTENT WITH THE ACT

FEMA has encountered numerous problems, as explained earlier, in trying to assess the "reasonableness" of State and local government commitments. To overcome these problems, FEMA unilaterally adopted in May 1980 a policy of providing 75 percent funding for eligible public assistance costs and requiring the State and local governments to finance the remaining 25 percent. FEMA advises us that the President ultimately decides the percent which State and local governments must assume.

Problems in obtaining a reasonable State and local commitment

To ensure that Federal disaster assistance is supplemental to State and local efforts, FEMA regulations require each State applying for Federal disaster relief to execute a Federal State agreement as a prerequisite to receiving Federal disaster assistance (44 C.F.R. 205.44 (1980)). Under these agreements, the Governor must assure that a reasonable amount of State and local government funds will be committed to disaster relief.

FEMA has difficulty in ascertaining the reasonableness of the Governors' commitments. FEMA's experience is that these commitments extended to circumstances where the Governors have on occasion agreed to assume (1) the expense of accomplishing work which is necessary for recovery purposes but which would not be eligible for Federal reimbursement under the disaster assistance program, (2) administrative and other costs, sometimes including the cost of prudent hazard mitigation to reduce or eliminate the threat of similar future damage and hardship, or (3) the entire cost of particular projects or categories of projects which would otherwise be eligible for Federal reimbursement. Governors have also, at times, agreed to a contribution based on a percentage of disaster-related costs which would otherwise be eligible for Federal reimbursement.

FEMA often found, after the fact, that the State and local contributions were not substantial or significant. Furthermore, States were not always prudent in their requests for public assistance. The Associate Director, DR&R, told us that States were providing limited commitments so far as public assistance was concerned and that FEMA attempted to negotiate greater contributions from States. The Deputy Associate Director, DR&R, told us that commitments were often soft, in that State and local governments often used normal programs such as police and fire departments as their required commitments.

At a Regional Directors' conference in December 1980, the Director, FEMA, cautioned that "without restraints the Disaster program could become a welfare program."

Adoption of cost-sharing policy for public assistance

In May 1980 FEMA adopted a policy of requiring all states to agree to pay 25 percent of the costs of eligible public assistance programs unless such States could show, or the President determines, that 25 percent was not a reasonable commitment. FEMA's adoption of the cost-sharing approach was an effort to obtain reasonable commitments of funds and uniformity among the States.

FEMA justified this new policy primarily on the grounds that it is in accordance with congressional intent to make Federal disaster assistance supplemental to State efforts and that such a policy readily ensures that States will pay a "reasonable amount" of the costs of disaster relief. FEMA believes that such a policy would also provide greater equity among the States. Some States, for example, have set aside funds to use in the event of a disaster while other States have no fund and, therefore, depend on 100 percent Federal funding. One State with a voter-imposed limitation on taxes argues that this limitation is grounds for more generous Federal disaster assistance.

FEMA also believes that such a cost-sharing arrangement has the advantage of reducing Federal expenditures for the disaster relief program--estimated at \$30 million in fiscal year 1982--and that it will reduce the time previously required to deliver disaster relief assistance to affected States by reducing the time it takes to evaluate the extent of State and local contributions to the disaster relief effort.

FEMA policy creating opposition and concern

FEMA's cost-sharing policy has created much opposition and concern on the part of Governors, legislators, and organizations of State officials. The Governors who have had to agree to the cost-sharing in order to receive Federal disaster assistance feel the 75/25 percent cost-sharing policy is an arbitrary FEMA decision that should not have been made without consulting with

them and the Congress. They contend that State and local governments already bear a major role in disaster relief because of their predeclaration commitment of resources and their assumption of ineligible public assistance costs. They also contend that FEMA's new policy further burdens the State and local governments by requiring them to pick up, in addition to the above mentioned cost, 25 percent of the eligible public assistance costs.

Legislators have expressed the belief that statutory authority does not support this policy, and several Governors have written directly to the President making such statements as:

- --"I am signing the Disaster Agreement under protest."
- --"I must object strongly to your limitation of Federal reimbursement for public facilities."

In view of the foregoing, FEMA has submitted proposed legislation to incorporate the 75/25 cost-sharing policy into present law.

Cost-sharing policy consistent with the act

FEMA has not formalized its policy by promulgating a regulation or by publishing a notice in the Federal Register. However, our analysis of the act and its legislative history indicates that FEMA can determine that previous levels of sharing have been unacceptably low and that 25 percent represents a reasonable level of State and local government participation in all foreseeable circumstances. The policy would not be proper if FEMA were unwilling to deviate from it no matter what the circumstances. However, FEMA informs us that it remains willing to modify its costsharing ratio if the circumstances surrounding a disaster warranted a different cost-sharing ratio. Thus, we cannot say that FEMA's policy is an abuse of discretion.

While this policy has not been embodied in a formal rule, FEMA has provided us with a draft of such a rule. The draft rule justifies this approach primarily on grounds that it is in cordance with congressional intent to make Federal disaster assistance supplemental to State and local efforts and that such a policy readily ensures that States and local governments will pay a reasonable amount of disaster relief costs.

The draft of FEMA's proposed rule expressing its 75/25 percent cost-sharing policy indicates that exceptions might be made when there are:

"* * * such extraordinary and compelling circumstances, unique to a particular disaster-affected State, that State and local contributions at this level or of this type would be clearly precluded. Such circumstances might

include the occurrence of an overwhelmingly catastrophic event or repeated disasters affecting the same jurisdiction."

FEMA's policy of requiring States to bear 25 percent of the cost of public assistance, if applied without exception, could result in State and local governments having to pay for disaster relief costs which they believe are beyond their capability or which they believe constitute more than a reasonable amount of State and local funds. Conversely, States which can afford to pay more than 25 percent could be allowed to contribute less than a reasonable amount.

We are not able to conclude that FEMA is acting improperly, as long as it does not refuse to make exceptions to the policy. In terms of the statutory goal that costs be shared between Federal and State and local authorities, FEMA can legitimately seek assurances that the State and local governments are, in fact, contributing a reasonable amount of their funds, as required by section 301(b) of the act. As a consequence, based on its experience with the program, FEMA concluded that 25 percent was a reasonable proportion for State and local governments in virtually all conditions.

CONCLUSION

FEMA's apparently strict adherence to the 75/25 cost-sharing ratio is based on a discretionary assessment that this cost-sharing approach results in a reasonable level of State and local government participation in disaster relief costs in almost all cases. It obviates the administrative problems associated with attempting to determine a reasonable commitment for each disaster and also assures compliance with the statutory purpose that the Federal aid be supplemental. Moreover, FEMA has left itself free to recommend providing more or less than 75 percent of the assistance should it be convinced in a particular situation that an exception is warranted. Under these circumstances, FEMA's cost-sharing policy is consistent with existing law. However, the policy has created controversy on the part of Governors, legislators, and organizations of State officials.

RECOMMENDATION TO THE CONGRESS

Because of the controversy surrounding FEMA's cost-sharing policy, we recommend that the Congress reevaluate the present law and clarify the extent to which supplemental Federal assistance should be given in major disasters and emergencies.

AGENCY COMMENTS AND OUR EVALUATION

The Director informed us that FEMA had not adopted a general policy of requiring State and local governments to pay 25 percent of eligible public assistance costs. He said such adoption would have had to be promulgated as a regulation in the Federal Register. Accordingly, he said all references to FEMA's policy on cost sharing should be corrected.

We see no need to change our terminology. We are using the word "policy" in a general sense as described by Webster's dictionary: "a principle, plan, or course of action, as pursued by a government, organization, individual, etc." We did not address the issue of whether this policy should have been promulgated in the Federal Register as it was not germane to our review.

USING THE DISASTER RELIEF ACT FOR OTHER THAN NATURAL CATASTROPHES NEEDS CLARIFICATION

In 1980 the President declared emergencies for the Cuban refugee influx into Florida and the chemical contamination of Love Canal in New York. This provoked congressional concern that the act was drafted too broadly and was being applied to catastrophes other than natural disasters as the Congress originally intended.

Because other than natural catastrophes do not generally fall within the definition of those catastrophes specifically enumerated by section 102 of the act, major disaster or emergency declarations issued in response to such catastrophes must be supported by reference to the general phrase in the act's definitional section "other catastrophe." While a literal reading of this phrase indicates that the President possesses considerable latitude in selecting the type of catastrophes which may qualify as major disasters or emergencies, the legislative history of the act indicates that the Congress intended it to alleviate State and local conditions caused primarily by natural catastrophes.

In 1980, the Senate Committee on Environment and Public Works criticized the President's declaration of an emergency for the Cuban refugee influx in Florida. The committee stated that the Congress historically intended Federal disaster assistance to apply to a fixed range of responses to particular kinds of events which were spelled out in the act's definitional sections. Furthermore, the committee stated that the reauthorization act (Public Law 96-568) should not be applied to extraordinary occurrences not specifically enumerated in the act insofar as it is not intended to provide assistance for occurrences of strictly a social or economic nature.

The Deputy Associate Director, DR&R, told us that he considers the Cuban refugee influx to be a man-made emergency. He contends that FEMA assistance was provided primarily to alleviate the hardship and suffering of Florida citizens and not to help the Cuban refugees. He contends FEMA should continue to provide such assistance because FEMA is the only Federal agency with existing authority to readily provide funds, direct other Federal agencies to act, and reimburse State and local governments for their expenditures.

CONCLUSION

Until the Congress amends the definition section of the act, by deleting the phrase "or other catastrophe" or includes an additional provision limiting the scope of the act to occurrences resulting from natural catastrophes, Presidential authority to declare a major disaster or an emergency in response to other than natural disasters exists. While Presidential declarations premised on this approach seem to be based on a broad interpretation of the act, nonetheless, as presently worded, the act gives discretionary authority to the President to determine which occurrences amount to other catastrophes.

RECOMMENDATION TO THE CONGRESS

We recommend that the Congress clarify the act by spelling out as clearly as possible the type of incidents which may receive disaster assistance. It could define more precisely the intended coverage of the act and specify that disaster assistance should be provided if there are no other Federal programs available and the State is unable to cope with the situation. FEMA and the administration would then be better able to administer the act as the Congress intends.

MAJOR DISASTERS, EMERGENCIES,

AND DENIALS REVIEWED BY GAO

Major disaste		•			
566 567 573 574 576 578 583 587 588 589 590 605 606 612 613 614 615 616 617 620 620	Oct. 9, 1978 Dec. 6, 1978 Mar. 7, 1979 Apr. 11, 1979 Apr. 13, 1979 Apr. 18, 1979 Apr. 30, 1979 June 14, 1979 June 15, 1979 June 23, 1979 July 1, 1979 Sept. 29, 1979 Sept. 29, 1979 Oct. 4, 1979 Nov. 9, 1979 Dec. 31, 1979 Feb. 6, 1980 Feb. 19, 1980 Apr. 9, 1980 Apr. 9, 1980 Apr. 16, 1980 July 24, 1980	Calif. La. Hi. Ark. Okla. Ala. Ill. Tex. Kans. N. Mex. Iowa N.C. Va. Conn. Am. Sam. Wash. Hi. Ariz. Calif. La. Ark. Mo.	9 6 9 6 6 4 5 6 7 6 7 4 3 1 9 0 9 9 9 6 6 7 5 9	1 1 1 8 23 1 2 2 1 1 3 12 128 3	618,553 328,294 335,866 909,482 255,000 249,808 462,600 133,000 618,555 475,098 967,000 219,341 444,000 650,000 287,292 732,946 024,918 783,242 389,000 566,000 547,034
633 Emergencies:	Oct. 2, 1980	Calif.		2	,607,376
3070 3071 3072 3073 3074 3075 3078 3081	Mar. 12, 1979 Mar. 12, 1979 Mar. 13, 1979 Mar. 15, 1979 Mar. 17, 1979 Mar. 24, 1979 Feb. 1, 1980 June 13, 1980	Wash. Mo. Ga. N.H. Ala. Fla. Calif. Pa.	10 7 4 1 4 4 9	21	30,000 100 41,000 319,168 657,338 784,506 ,294,311

FEMA declaration number	Date of declaration	<u>State</u>	FEMA region	Total estimated requirements (note a)
Denials:				
· 	Mar. 12, 1979	Fla.	4	\$ 3,053,960
-	Mar. 30, 1979	Miss.	4	913,804
	Apr. 23, 1979	Wash.	10	976,000
	Nov. 26, 1979	Kans.	7	1,227,100
. •••	Dec. 7, 1979	Hi.	9	2,465,500
***	Apr. 26, 1980	Hi.	9	1,461,560
	May 1, 1980	N.Y.	2	3,570,000
•	May 31, 1980	N.Y. (Ap	peal) 2	3,570,000
-	June 10, 1980	Ala.	4	963,211

a/Estimated requirements for major disasters and emergencies were obtained from FEMA reports available at the time of our review. Amounts related to denials were obtained from regional disaster summary reports.

TECHNICAL ANALYSES

This appendix provides details for the technical reader on he analyses and models used in this report.

HE DATA BASE

We analyzed 96 of 102 requests for disaster assistance from iscal years 1979 and 1980. Our primary source of information as the FEMA decision files on each disaster. The files contained information on FEMA's decisions with respect to the Governors' equests—i.e., complete or partial assistance granted and assis—ance denied. The files contained statistics describing the agnitude of the disasters, in terms of number of lives lost, eople injured, number of homes damaged, and similar data. The iles also contained miscellaneous data on a State's capability to handle the disaster and some information on the local dollars dommitted to dealing with it. We identified a total of about 30 pertinent variables contained in the FEMA files.

The major problem with the data was that much of it was issing or ambiguous. While a few of the 96 requests had inforation on most of the 30 variables, most did not, and it was ot always clear as to why the data was missing. For example, f there were no statistics on number of homes damaged, we did ot know whether any homes were damaged in the disaster or whether o good estimates to report existed.

A review of some of the requests and discussions with FEMA fficials led us to believe that often requests with missing alues fell into two categories: (1) minor disasters where a issing value usually meant zero or a relatively small number nd (2) obviously large disasters like Mt. St. Helens where a issing value meant a large number and officials, in their hurry o process the request, did not take the time to estimate the umber.

We tried to reconcile the missing data problem in several ays. We used only the important variables with the least of missing data and combined several variables. For xample, we combined homes with minor damage, major damage, nd those completely destroyed into one measure of homes damaged. e also added the estimated amount of eligible costs for indicidual assistance and public assistance to have one figure as he total amount of eligible assistance. This combination of ariables was also desirable to reduce them to a manageable umber for the regression analysis discussed later.

Another way we tried to solve the problem was to substitute hat we believed were reasonable estimates for missing values. or example, there were 16 requests that had missing values or the total estimated eligible costs—an essential variable or the analysis. We found that 9 of the 16 requests were large nd declared as disasters. For these, we used current estimated

requirements as a substitute. The other seven requests were denied assistance and appeared to have total damage less than the smallest request received (\$138,000). We arbitrarily assumed \$100,000 as the total eligible costs for these denied requests. We did not have good substitute values for missing data on homes damaged or people killed or injured so we assumed they were zero for some analyses. While the assumption may be adequate for the small disasters, it is probably inadequate for the large disasters. Consequently, we dropped the nine large disasters with missing values from some of our manalyses.

In addition to the FEMA files, we collected data from the statistical abstract on per capita income in the States where the disasters occurred—we used this as an indicator of a State's financial capacity. For jurisdictions in the Pacific, such as the Trust Territories with no published data on per capita income, we assumed a value of \$1,000.

Such assumptions and approximations may appear to make any analyses of questionable value. The reader should certainly keep these limitations in mind in reviewing the results. However, a major focus of our analysis was to assess FEMA's decisionmaking criteria and this application data with all the missing values is the primary data FEMA had on which to base its decisions, although FEMA probably supplemented the decision file data with some information from phone calls and other informed contacts. While our assumptions may be crude, we expect that they simulate, to some degree, the assumptions FEMA made.

BASIC ANALYSIS

For selected variables, we developed a separate frequency distribution for both granted and denied requests. These variables are total estimated eligible costs, people injured, homes damaged, State per capita income, month the event occurred, political party of the Governor, and commitment statement on the part of the State in which its disaster occurred. These distributions were compared to see if there was a difference between granted and denied requests. These distributions are shown in the tables in the text of the report.

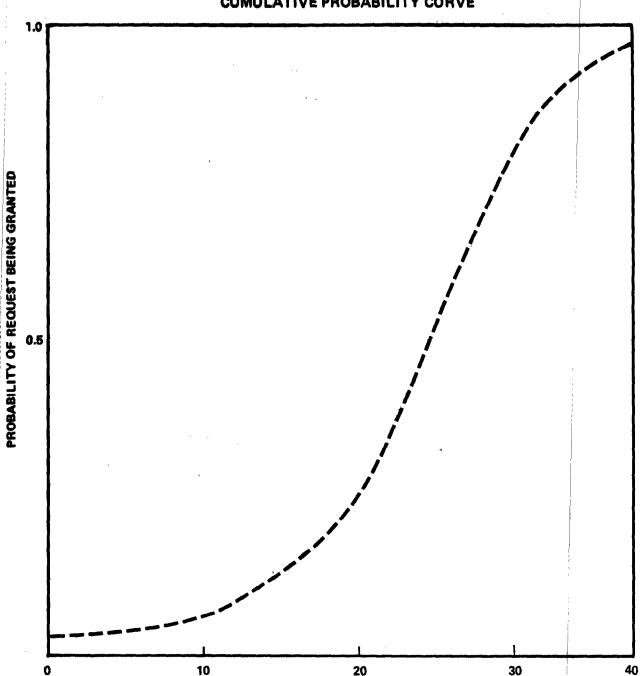
DECISION MODELS

To further estimate the basis of FEMA's decisions we developed several statistical models. We attempted to see how FEMA used several variables in concert to make decisions. For example, if some measure of disaster severity were extremely high, would this compensate for other variables that were low? We also used the models for leads on cases that FEMA may have classified inconsistently. This was done by determining what individual cases the models classified the outcome, granted or denied, differently than FEMA.

APPENDIX II

The model's were basically statistical multiregression models. But instead of using the traditional straight line regression, we used an "S" shaped curve to try to better fit the data to the dichotomous dependent variable, i.e., 0 (denied) or 1 (granted). See figure 3, which is a hypothetical example showing the cumulative probability of granting assistance for one independent variable.

FIGURE 3
CUMULATIVE PROBABILITY CURVE



TOTAL ESTIMATED ELIGIBLE COST IN MILLIONS OF DOLLARS

We used a logit model based on the cumulative logistic probability function which is often used to give this kind of probability curve. The equation for the logistic model is:

$$P = \overline{1 + EXP \left[-(B_0 + B_1 X_1 + B_2 X_2 ... + B_n X_n + u) \right]}$$

where: P is the probability a request is granted.

 x_1 , x_2 ... x_n are the influencing variables, i.e., size

of disaster in dollars, homes damaged, etc.

Bo is the constant term in the regression equation.

 B_1 , B_2 ... B_n are the regression coefficients for the

variables, size of disaster in dollars, homes damaged, etc.

EXP is the exponential function.

u is the error term.

The logit equation can be written as: 1/

$$z = Log_{u}\left(\frac{p}{1-p}\right) = B_{0} + B_{1}X_{1} + B_{2}X_{2}...B_{n}X_{n} + u$$

Where: Z is a probability index that a request is granted.

while some authorities recommend estimating the logit models by Maximum Likelihood or simulation, we used the simpler Ordinary Least Squares (OLS) method using P=.999 for P=1 and P=.001 for P=0. These approximations were necessary because otherwise Z will be undefined. The more sophisticated method may be more mathematically rigorous, but in many cases will give the same results as OLS.

^{1/}If the estimated probability of approval, as derived from the estimated value of Z, is equal to or greater than .5, the request is considered approved, otherwise it is denied.

Another analytical problem was that requests for assistance can be decided in several ways. For example, a request for a combination of both individual and public assistance could be decided in four ways: (1) both granted, (2) only public assistance granted, (3) only individual assistance granted, or (4) both denied. But, the models were designed only to classify decisions in one of two ways--granted or denied. Ideally we would have liked to develop separate models for each type of assistance but there were not enough observations to do this. To partially accommodate this problem we grouped all the requests together and included the categorical variables-type of request. We also ran separate models for certain categories.

To more thoroughly analyze FEMA's decisionmaking process we experimented with different variables. In some cases we also combined several variables into one term, an interaction term. This is an attempt to capture differential responses for some of the continuous variables, e.g., total eligible cost, number of homes damaged, etc. As a consequence, several models were developed. Six of these are shown in table 8 of the text. The discussion that follows is a summary of the results of the six models.

Regression results

For most of the six models a positive relationship exists between the Z score and the total eligible costs, number of people injured and number of homes damaged. 1/ This indicates that the greater the values of total eligible costs, the more people injured, and the more homes damaged, the greater the probability of a request being granted.

The impact of a Governor making the required commitment statement is not entirely clear since the coefficient for the commitment variable is not significant at the 80 percent confidence level except in one case. Also, the sign of the coefficient is negative in two of the models.

The coefficient of the month variable is negative and is usually significant. It suggests that the probability of getting a request granted is less the more months that pass starting from October 1978 if all other variables remain the same. This may be partly because of inflation decreasing the real value of total dollars requested. Also, while the month variable was not explicitly designed to estimate fiscal year influences, it probably picked up some of the impact of budget problems towards the end of fiscal year 1980.

^{1/}While eligible cost and people injured were statistically significant in the six models, homes damaged was significant in only three of the models.

The sign of the coefficient of per capita income is negative but is not significant at the 80-percent confidence level in most models. This negative sign indicates that the chance of a request from a State with a low per capita income being granted is higher if everything else remains the same.

Table 10 shows the regression coefficients for the Z score for two different models provided for illustration purposes. These numbers show the magnitude and direction of the relations between the variables and Z scores. The significance of the coefficient is indicated by the "t" shown in parentheses. The larger the absolute number for "t" the more confident we are in the significance of the coefficients. 1/

Summary statistics on the table are indicators of how accurately the regression equation, as a whole, expresses the relationship among variables. The \mathbb{R}^2 expresses the percentage of the variation in Z score that is explained by the influencing variables. The closer \mathbb{R}^2 is to 1.0 the better the equation fits the data.

The R² we achieved for some of the models might be considered somewhat low. However, in this kind of model with qualitative dependent variables, the goodness of fit of these equations is better measured by the percentage of correct classification of decisions (i.e., cases the model classified the same as FEMA). Most of the models classified more than 80 percent of the decisions as FEMA did. Overall, we believe the regression equations express the relationship between the decision and the other variables reasonably well. However, we feel FEMA needs to do additional work on those models before they can be used for assessing requests.

We also used the six models to find leads on cases that FEMA may have classified inconsistently. But they seemed to overclassify cases granted because of certain technical problems. There seemed to be a different probability of a case being clared for the different types of assistance. For example, if one requests both types of assistance FEMA seems more likely to grant either both or individual assistance in comparison with granting public assistance. We did not try to evaluate FEMA's underlying rationale for this but we tried to capture these influences by adding the categorical variable-type of assistance granted. Therefore, some of the models have not only the variables that characterized the disaster, e.g., people injured, but also the two categorical variables—type of request as well as type of assistance granted. The combination of these two categorical variables in a sense measures the propensity of FEMA

^{1/}Some authorities would argue that all variables would be significant in our analysis since we are dealing with the universe of requests in fiscal year 1979 and 1980 and not a sample.

to grant certain types of assistance given a certain type of request. We also used these additional models to look for FEMA inconsistencies. Table 11 lists the cases that FEMA classified differently from any of our models. To further evaluate if these 20 cases were inconsistent FEMA decisions, we compared the values of key variables, e.g., number of homes damaged, for these cases with the average value for the particular type of assistance granted. In those cases denied, the values of key variables were compared with the average of those turned down. Table 9 in the text shows this comparison for eight cases.

Table 10
Selected Regression Equations

	Model number	
Independent variables	3	5
Constant	5.7987* (2.06)	8.4649* (2.58)
Request for individual assistance only	-5.8968* (-3.05)	
Request for public assistance only	-9.0600* (-5.54)	
Total estimated eligible cost, in \$100 millions	3.6828* (1.37)	27.343* (1.66)
Homes damaged and destroyed, in thousands	0.8259* (2.08)	0.2074 (0.43)
People injured, in thousands	9.9469* (1.51)	29.7749* (2.30)
Per capita income in the State in which the disaster occurred, in dollars	-0.0004 (-1.08)	-0.0003 (-0.94)
If Governor made required commitment statement	0.4873 (0.43)	-1.3144 (-0.92)
Month of decision		-0.2458* (-2.38)
Summary statistics		
R ² Number of decisions	0.40 96	0.24 67
Number of decisions classified differently than FEMA	16	13
Percent of decisions classified the same as FEMA	83	81

^{*} Significant at least at the 80-percent confidence level.

Table 11

Decisions that Models Predicted Differently from FEMA

23222222222222222222222222222222222222	Decision number
00++0000000000++++	rema decision (note a)
000044444444000q	Model decision (note a)

<u>a</u>/0 indicates disapproval and indicates approval.

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Federal Emergency Management Agency

Washington, D.C. 20472

SEP 29 1981

Mr. Henry Eschwege
Director
Community and Economic
Development Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

I appreciate the opportunity to review the draft report entitled "Improvements Should Be Made in Evaluating Requests for Federal Disaster Assistance." As the agency charged with the responsibility for administering the President's Disaster Relief Fund, FEMA has an interest in the entire subject matter of this report.

This report has a number of worthwhile comments regarding the problems associated with State and local government commitment, State and local government capability, and cost sharing. These are interrelated and must be considered in requests for Federal disaster assistance under Public Law 93-288. FEMA has been seeking improvements in this area and currently is in the process of revising 44 CFR 205, Subpart C, the Declaration Process. The comments and recommendations in this draft report will be considered in this revision.

FEMA, on behalf of the Administration, has submitted an amendment to the Disaster Relief Act by including 75/25 cost sharing for Public Assistance. We believe that our proposal would result in a clear identification of funds expended on the part of a State and its local governments as required by the Act for a commitment.

I am enclosing specific comments on this draft report.

Sincerely.

Lours O. Affrida

Director

Enclosure

GAO DRAFT REPORT ENTITLED "IMPROVEMENTS SHOULD BE MADE IN EVALUATING REQUESTS FOR FEDERAL DISASTER ASSISTANCE

Specific Comments by FEMA to this report are:

- 1. Page 6, second paragraph. This paragraph refers to FEMA's evaluation of requests wherein it states that "FEMA advised us that it had no specific criteria for evaluating requests for assistance..." There are criteria established in Sections 201 and 301 of the Act that FEMA uses for its evaluation of requests.
- 2. Page 8, first paragraph. This paragraph dealing with "unmet needs" and "impact" is accurate, but this paragraph also fails to recognize the statutory criteria contained in Sections 201 and 301 of the Act. (See GAO note 2, below.)
- 3. Page 8, first paragraph under Problems. In responding to a request, regional personnel visit the scene of the incident to make a first-hand evaluation of the damage and requirements for Federal assistance. The report then states, "They then make their recommendation to the Director of FEMA..." It would be more correct to revise the last sentence to read, "Based on this review, the Regional Director then makes a recommendation..."
- 4. Page 10, second paragraph. The first sentence reads, "It is clear that the higher the estimate of eligible costs, the greater the chance of a request being granted." This is not entirely correct. Generally, it would be true for the same State, the same type of catastrophe and under similar circumstances.
- 5. Page 13, State Commitment. It should be noted that for some disasters in the past, a declaration was made with the expectation of working out the specific State commitment and including it in the Federal-State Agreement. Section 44 CFR 205.44 provides that the Federal-State Agreement shall contain a statement of the commitment. Since no FEMA funding is approved until this agreement is signed, the specific commitment is sometimes obtained after the declaration. Instances of this are rare and are generally limited to those situations where immediate Federal assistance is required to prevent a delay in initiating Federal disaster response activities.
- 6. Page 19., first recommendation. That FEMA develop comprehensive, uniform forms to be used by Governors in submitting their requests and by regional offices in performing damage assessments.
- FEMA is currently in the process of revising 44 CFR 205, Subpart C, the Declaration Process. This recommendation will be considered.
- 7. Page 19, second recommendation. That FEMA use computer models such as those developed by GAO as a tool for program decision-making and evaluation.
- GAO notes: 1. Some page references have been changed to agree with the final report.
 - 2. This paragraph refers to FEMA's internal guidelines. Statutory criteria is set forth on pages 23 and 24.

Nonconcur. The use of a computer model may have some merit in the evaluation of certain aspects of the Disaster Relief Program and has been discussed. However, its use in decision-making with regard to disaster requests is severely limited. Key factors in the evaluation of a request include hardship, suffering and impact. There is no proper way that these can be quantified for use in a decision-making computer model.

- 8. Page 23, line 18: "Prior" should be added before "expenditure," so the sentence will read, "The prior expenditure of funds is not a prerequisite for emergency requests, but the Governor is still required to..." In the definition section (102(1)), an "emergency" is a catastrophe "...which requires Federal emergency assistance to supplement State and local efforts to save lives and protect property..." Further, in requesting an "emergency," a Governor must describe the "State and local efforts and resources which have been or will be used to alleviate the emergency..." (Section 301(a).) We therefore conclude that some expenditure of State and local funds must be made either before or following an emergency.
- 9. Page 23, last paragraph. These comments with regard to the capability and commitment of State and local governments will be considered in the current revision of Subpart C.
- 10. Page 24, fourth paragraph. The report states that FEMA does not always require Governors to comply with legal requirements. FEMA has taken corrective action in this regard. FEMA is insisting that these legal requirements are complied with when a request is made.
- ll. Page 29, second paragraph. The statement that FEMA bases its decision on the "Governor's request" and "whatever additional information is readily available" infers that FEMA may not adequately investigate each request. It should be noted that for marginal requests, FEMA national office does request additional information which may require field trips and research. These cases go beyond "readily available" in the scope of assessments.
- 12. Page 30, fourth paragraph. With reference to "budgetary relief," the comment in this report is not consistent with the comments and recommendations made by GAO in its August 2, 1979 report, "Federal Snow Removal Policy: Improvements Needed."
- 13. Pages 33 and 34, Recommendations. GAO recommends that the Director of FEMA take the following actions:

Reevaluate and improve FEMA's assessment criteria.

Establish written policies, procedures, and guidelines that are used by FEMA to evaluate major disaster and emergency requests and publish them in the Federal Register. This should include (1) an explanation of FEMA's basic philosophy for evaluating capability and commitment, (2) an expression of the use of evaluation factors such as debt and borrowing

capacity, surplus funds, prior disaster history, and (3) its positions on budgetary relief, forced commitments and similar matters.

Require that Governors' requests include comprehensive information on State laws and funding provisions, State revenues, per capita income, disaster trends, and similar factors to expedite FEMA's assessment of the level of capability each State could attain and to aid FEMA in evaluating the reasonableness of State commitments.

Make it clear that future requests which fully comply with Federal laws and regulations will help avoid delays in processing the requests.

Require the documentation of all substantive discussions and evaluation meetings held by FEMA.

The first four recommendations are being given consideration in the development of Subpart C. As to the final recommendation, we agree that documentation of the basis for the final recommendation, including the statement of relevant factors considered, is needed. However, we would not want the documentation process to impede the expeditious processing of the requests. It is FEMA's position that such documentation is not available under the Freedom of Information Act.

- 14. Page 35, first paragraph: FEMA has not "adopted a general policy of requiring State and local governments to pay 25 percent of eligible public assistance costs." Such adoption would have had to be promulgated as a regulation in the Federal Register. Rather, the FEMA Regional Directors, with Governors of disasteraffected States, have entered into Federal-State Agreements for each disaster starting with Mount St. Helens in May 1980, which provide that the costs of public assistance shall be met 75 percent by FEMA and 25 percent by State and local governments. For a vast majority of such disasters, the President has required this cost-sharing directly in his declaration letters. All similar references to FEMA's "policy" on 75/25 cost sharing at pages 35-39, and elsewhere in the report, should be corrected.
- 15. Page 35, third paragraph. The first sentence reads, "To ensure that Federal disaster assistance is supplemental to State and local efforts, FEMA's regulations require each State applying for Federal disaster relief to execute a cost sharing agreement as a prerequisite to receipt of Federal disaster assistance..." This is misleading and technically inaccurate. FEMA's regulations do not require that Federal-State Agreements be "cost sharing agreement[s]." However, the report correctly notes that the Governor must assure that a reasonable amount of State and local government funds will be committed. The first sentence can be corrected by the elimination of "cost-sharing" in the third line.

16. Page 38, Recommendation to the Congress. That the Congress reevaluate the present law and FEMA's cost sharing policy and clarify the extent of supplemental Federal assistance to be given in major disasters and emergencies.

Concur. FEMA, on behalf of the Administration, has submitted an amendment to the Disaster Relief Act by including 75/25 cost sharing for Public Assistance. Our proposal applies to restoration work and debris removal but not to other emergency work. We believe that this proposal would result in a clear fidentification of funds expended on the part of a State and its local governments as required by the Act for a commitment. Also, it would provide a more consistent approach among States with regard to their commitment on public sector repairs.

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