

DISASTER PLANNING AND RELIEF**Case Studies, Brief Summary**

July 1, 1993 - November 31, 1993

As of November 31, 1993 a total of 108 participants in disaster planning, response, and relief efforts were contacted by telephone to review the Disaster Planning and Relief Questionnaire. Most respondents were first mailed the Questionnaire then called to discuss it.

We have selected 90 case studies, which are included in this report. A few of the disasters studied included more than one case study from the same agency.

This summary is an overview of the responses provided in the Questionnaire. It is important to note that the data and narrative included in this report are based on the *responses* provided by the participants. The report addresses specifically *how the respondents replied* to the Questionnaire.

Question #1: What disaster did your area experience?

The number of case studies for each type of disaster is:

Earthquake:	10
Fire:	6
Flood:	20
Hurricane:	26
Storms:	3
Tornadoes:	18
Other:	8
<u>None, N/A:</u>	<u>17</u>
Total:	108

From the case studies, the frequency order of disaster types studied is:

1. Hurricanes
2. Flooding
3. Tornado
4. Earthquake
5. Fire
6. Storm and Others

The Earthquakes discussed include the Loma Prieta and Big Bear/Landers. Both occurred in California.

Fire includes the East Bay Hills Firestorm, one agency fire, and others.

Flooding includes several agencies that experienced the recent widespread flooding in the midwest, as well as others that experienced past flooding.

Hurricanes include Andrew, Hugo, Iniki, and others.

Storms include two storms, one in Delaware (two different agencies) and one in New Jersey.

Tornadoes include a variety of intensities, from random touch-downs in rural areas to a series of strikes lasting for hours.

None, N/A refers to the agencies contacted that have not directly experienced a disaster but provided valuable information regarding disaster preparedness and disaster planning. Some include comments from the state level.

Other includes less frequent disaster types. They include: Blizzard (one), Snow (one), Drought (one), Ice Storm (two), Volcanic Eruption (two), and Heat Wave (one).

We have focused on those agencies that experienced a declared disaster - declared either by the State or by the Federal Government. However, several studies include smaller-scale situations that were not declared disaster areas.

Question #2: When did this occur?

The majority of contacts indicated the month and year of the disaster; some were able to pinpoint the specific date. Only one was unable to say when it occurred.

The time period of the disasters studied ranges from hurricanes and flooding in the 1970s to the flooding in the midwest (Summer of 1993). The vast majority of disasters discussed took place within the last five years, with heavy concentration over the last four years.

<u>1970-1974</u>	4.4%
<u>1975- 1980</u>	5.6%
<u>1981-1985</u>	7.8%
<u>1986-1990</u>	20.0%
<u>1991-1993</u>	61.0%
<u>Don't know:</u>	1.1%

Question #3: What types of damage did your community experience?

The most common types of damage to the communities included homes destroyed, economic ruin, businesses destroyed, extensive damage to widespread areas, and power outage. In many instances the psychological trauma to the community was significant. For major disasters there were many injuries and profound loss of life.

In general, the greatest damage in the affected communities was caused by water-related disasters: flooding, hurricanes, storms. Community damages by water-related disasters included loss of homes and personal items, flooded car engines, loss of drinking water, sanitation hazards, danger with downed electrical lines, and others.

Damage from earthquakes ranged from cracks in the wall to bridge collapse and infrastructure impairment.

Fires destroyed large areas of the community, causing loss of homes, vegetation, power, agriculture, transportation operations, and business records and files.

Tornadoes also wiped out large areas at once, totally destroying homes and businesses, with mobile home parks particularly vulnerable.

Almost all of the agencies interviewed indicated severe damage to the community from the disaster that hit.

In order of how often the respondents indicated a type of damage, the most common reported damages are:

1. Homes destroyed.
2. Power outage.
3. Extensive damage to community.
4. Flooding and Deaths (tied)
6. Infrastructural damage to community.
7. Injury and/or illness.
8. Total devastation.
9. Roads and highways made impassable.
10. Land, crops, agricultural industry ruined.
11. Mobile home parks ruined.
12. Other areas damaged more severely.
13. No major damage from disaster.
14. Water system impaired.
15. Evacuations necessary.

Question #4: Did your agency experience any damage?

Approximately 17% of the agencies surveyed experienced damage to either the central office or to off-site centers. Mostly the agencies suffered minimal to moderate damage, although one agency's building was condemned and a handful of agencies lost several off-site offices.

Question #5: Did any of your employees experience damage to their homes or were they injured? What happened?

About 25% of the agencies interviewed indicated that staff members experienced damage to their homes. Most staff home damages resulted from hurricanes, with tornadoes second and flooding third (in terms of frequency of response to this question).

Many of these staff members suffered major damage to their homes and had to rebuild, repair, or relocate. Some staff members had minimal to moderate damage to their homes. Most of the affected employees experienced power outage for some time.

One agency lost staff members to a tornado. Few of the agencies reported staff injury, although in many cases emotional trauma was noted. An agency in Alaska said some employees suffered from asthma or respiratory problems with ash fall-out from a volcanic eruption.

During the conversation, if the respondent indicated that staff members did experience damage to their homes, the respondent was then asked if the agency extended services for those employees. In an official capacity, very few agencies provided special services to affected staff. The majority of agencies offered affected employees time off with pay to attend to their immediate needs.

Storms and Fires caused no reported damage to agencies or to staff. Hurricanes, Tornadoes, and Earthquakes respectively did more damage, and the damage done to staff is higher than to the agency buildings.

Question #6: What types of relief did your agency provide?

<u>Food</u>	<u>Rescue Work</u>
<u>Clothing</u>	<u>Rebuilding</u>
<u>Shelter</u>	<u>Emergency Child Care</u>
<u>Transportation</u>	<u>Managing volunteers</u>
<u>Appliances</u>	<u>Supplementary Energy Assistance</u>
<u>Other:</u>	

Not all agencies surveyed were involved in providing disaster relief services, but most were. The services that agencies provided were effected in the following order of frequency:

1. Food (includes provision, distribution, collection, and preparation of hot meals).
2. Other (covers a wide variety of services).
3. Clothing (distribution and collection).
4. Transportation (of clients, also includes provision of vehicles to other groups).
5. Supplemental Energy Assistance.
6. Shelter (includes temporary shelters, hotel vouchers).
7. None.
8. Provided supplies.
8. Repairs.
8. Storage and Distribution of Goods.
 11. Weatherization.
 12. Food Bank assistance.
 13. Housing.
 14. Outreach and Information & Referral.
 15. Appliances.
 15. Managing Volunteers.
 17. Rebuilding.
 18. Disaster Assistance Center Assistance (helping other services, especially Red Cross).
 19. Emergency Child Care.
 19. Relocation/Rental assistance.
 21. Evacuation.

For the most part, Community Action Agencies provided those services that related to programs operating in the agency. That is, food pantry programs and nutrition sites were used for food preparation and/or distribution; agencies with homeless shelters opened their shelters to disaster victims. Almost all of the agencies offered more than one type of relief service.

Question #7: What types of relief did other agencies provide, specifically:

Red Cross

FEMA

State Emergency Services Agency

County Emergency Services Agency

Salvation Army

Other:

Red Cross and the Salvation Army appear most frequently as the two external agencies that lead disaster relief assistance. FEMA assisted with federally declared disasters, although it received more criticism from the Community Action Agencies that were disappointed with response time or amount of assistance.

In general, respondents were not as familiar with State Emergency Services and County Emergency Services response, although other agencies greatly appreciated those efforts. Emergency Services did not appear as often as Red Cross or Salvation Army at the disaster sites.

Other groups that were instrumental in helping out include local churches, ministerial associations, and United Way. Many CAAs indicated an outpouring of community effort.

When asked about the types of relief that each organization provided, respondents generally said something to the effect of, "Yes, they came in and set up." Unless otherwise noted, standard operations are assumed for Red Cross, FEMA, and Salvation Army in the case studies. Standard operations include, but are not limited to, the following:

Red Cross - Shelter set up, food distribution, clothing donations, and provision of medical supplies, blankets, and water.

FEMA - Set up of DAC (Disaster Assistance Center) used to process applications for grants or loans for homes. Gave funding for home repairs and use of trailers for displaced victims.

Salvation Army - Distribution and collection of food, clothing, and money; shelter set up.

State Emergency Services Agency - Includes the services of police departments, fire departments, and others; involved with security issues, small business loans, food vouchers, additional funds to victims and social service agencies. Coordinates with the National Guard.

County Emergency Services Agency - Clean up efforts, debris removal, repair of roads and downed electrical lines. Sheriff's department mentioned frequently.

Agencies noted that these groups usually work with the others to coordinate efforts.

Question #8: For about how many months did you provide those services?

Duration of relief efforts ranged from 24 hours (overnight shelter) to over 96 months, ongoing (flooding). A few agencies were unable to estimate how long their services were provided. Many of the agencies that were able to estimate length of disaster relief services noted that initial efforts were more intense, and lasted a shorter amount of time than the continued delivery of relief services. For example, an agency that provided relief for a fire did so for two months, with the first week intensely dedicated to serving immediate needs.

The following tables show the average length of service provision for the different disaster types. The right-hand column is a comparison of the average length of service provision for those agencies that experienced damage to their buildings (see Question #4). The table provides a general idea of how long agencies provide relief services; however, due to the differences in types of services provided, physical location, and magnitude of disasters, the averages do not reflect general trends.

		<u>Mean</u> (averaged length of service)	
<u>Average Length of Service Provision:</u>		<u>Average of Agencies Suffering Damage:</u>	
Earthquake:	7.14 months		9.2 months
Fire:	1.67 months		n/a
Flooding:	13.97 months		2.1 months
Hurricane:	8.38 months		7.8 months
Other:	1.0 month		1.0 month
Storm:	5.03 months		n/a
Tornado:	5.53 months		9.3 months
Total Average:	6.1 months		5.9 months

		<u>Median</u> (number of months that falls in the middle of the data range)	
<u>Average Length of Service Provision:</u>		<u>Average of Agencies Suffering Damage:</u>	
Earthquake:	6 months		7 months
Fire:	2 months		n/a
Flood:	2.75 months		3 months
Hurricane:	8 months		10 months
Other:	1 month		1 month
Storm:	3 months		n/a
Tornado:	3.75 months		8.25 months
Median Average:	3.78 months		5.85 months

Mode
(number of months appearing most frequently in the distribution)

<u>Average Length of Service Provision:</u>		<u>Average of Agencies Suffering Damage:</u>
Earthquake:	2 and 12 months	2 and 12 months
Fire:	n/a	n/a
Flood:	2.5 months	n/a
Hurricane:	12 months	12 months
Other:	1 month	1 month
Storm:	n/a	n/a
Tornado:	1 and 12	12 months
Mode Average:	6.07 months	7.8 months

In summary, hurricanes, flooding, and tornadoes seem to require more time for the provision of relief services. Generally the agencies that suffered staff and or agency damage spent more time with relief services.

Question #9: About how many people were helped by your (agency's) efforts?

Based on respondents' guesstimates, the following averages reflect the number of persons served by agency relief efforts by disaster type. Because many respondents offered a range (for example: "We assisted maybe 75 to 100 people"), we have averaged the given range to obtain one value.

<u>Earthquake</u>	<u>Fire</u>	<u>Flood</u>	<u>Hurricane</u>	<u>Other</u>	<u>Storm</u>	<u>Tornado</u>
1,005	342	1,017	2,834	425	535	403

The number of persons helped by agency relief efforts correlates to the magnitude and intensity of the disaster itself. Fires do not affect as widespread of an area as do hurricanes or floods; therefore, fewer persons on average are provided with relief efforts by agencies experiencing fire in the community.

Question #10: What percentage of the people you helped were already receiving other services from your agency and what percentage were new people coming to your agency because of the disaster?

Already receiving: %

New: %

Most replies were qualified as guesses; very few agencies documented this statistic.

The responses to this question varied significantly. Variance may be attributed to the type of community served. That is, agencies in rural areas are likely to see more familiar faces, while agencies in urban areas are likely to see more new faces. Several respondents mentioned the economic status of the clients as a factor in who received services. For example, one "flood" agency answered, "Already receiving: 35%. New: 65%. Most of the people we helped were above the income guidelines."

The following tables show the mean and median of the percentages by disaster type. The mode is not applicable in many instances, so it is not included here.

Mean
(averaged percentage)

<u>Earthquake</u> Already receiving: 48% New: 52%	<u>Fire</u> Already receiving: 40% New: 60%	<u>Flood</u> Already receiving: 37% New: 63%
<u>Hurricane</u> Already receiving: 50% New: 50%	<u>Storm</u> Already receiving: 54% New: 46%	<u>Tornado</u> Already receiving: 25% New: 75%

Median
(percentage falling in the middle of the data range)

<u>Earthquake</u> Already receiving: 50% New: 50%	<u>Fire</u> Already receiving: 20% New: 80%	<u>Flood</u> Already receiving: 33% New: 66%
<u>Hurricane</u> Already receiving: 60% New: 40%	<u>Storm</u> Already receiving: 51% New: 49%	<u>Tornado</u> Already receiving: 18% New: 82%

For fires and tornadoes, agencies see many more new clients than previous clients.

Question #11: Did you receive any media coverage for your disaster relief efforts?

A handful of agencies received direct media coverage of its disaster relief efforts, especially through newspaper articles and newsletters. The majority of agencies either did not receive direct media coverage or the media broadcast their services as a public service announcement. A couple of agencies provided press releases to update the community on their efforts and the services available.

Question #12: Would information about your methods help other CAA's to get ready for future disasters?

Seven respondents said they did not think so. Eight others said they believed their agency's methods would benefit other CAAs, but did not specify how or why. Three did not know. Of the many agencies that provided specific information that may be beneficial to other agencies, the Top Ten responses include, in order of frequency, the following:

1. Have a communication system established ahead of time; know whom to contact. (25)
2. Develop a current disaster plan. (24)
3. Focus on outreach efforts. (15)
4. Plan out a communications system. (12)
5. Ensure a quicker response. (8)
6. Have appropriate personnel (trained, bilingual); allow staff to rest. (7)
7. Have funds available. (5)
8. Establish an on-call crew. (4)
9. Maintain kitchen operations. (3)
10. Ensure transportation system. (3)

Overall, the majority of agencies indicated that information about their methods would help other CAAs to get ready.

Question # 13: Would you do anything differently next time? What?

Seven agencies would respond in the same way. All of the others indicated at least one improvement they would make in their response if a disaster was to strike again.

The most frequent comment of what they would do differently involves establishing a leadership group, community-wide network, or similar planning process to review agency's roles and responsibilities, limit duplication of efforts, and outline preparedness and relief activities among all of the interests.

Another frequent answer was to address the communication system. Communications between agencies, between agencies and the community, and within an agency were noted as needing improvement. Several agencies talked of the difficulties involved with power outage and downed phone lines.

Making plans now and determining who is responsible for what was another frequent response to this question. Quite a few agencies stressed the significance of such activity, indicating that not having solid plans in place would be a major deterrent to providing relief.

Also, agencies wish to be better informed of the activities at the state and federal levels. At least seven agencies mentioned a desire to be kept abreast of what county disaster assistance centers are doing, what specifically are the feds and state doing, and how to be more effectively involved with FEMA.

Agencies also noted the importance of getting more staff out, and getting staff out quickly. Four agencies said it is important to know who the "disaster people" are.

Numerous other changes agencies would make for future disasters were mentioned, including reviewing staff assignments, having more publicity, letting staff off early, providing more aggressive evacuation efforts, having the state adjust income guidelines, etc. The desired changes should be understood in the context of the agency's disaster experience, of course.

Question #14: Has anyone in your agency had discussions with other local or state agencies about planning for future disasters? If yes, who?

The good news is that about 53% of the agencies surveyed have some level of involvement with other agencies about planning for disasters. The level of involvement ranges from informal, occasional discussions to full-blown community interaction with a number of local groups.

The bad news is that 47%, or about 49 agencies have not had discussions with other groups about disaster planning. Four others answered that they did not know or were not aware of any such discussions.

A few agencies (3) indicated that other local groups are attending to disaster planning, but the activity does not include the agency that responded.

Three other respondents said that at one time, discussions were taking place with different groups; however, that is not happening now.

Three have had discussions with other groups, but the groups named are active at the national or regional level, not locally.

Question #15: In your agency, who could we ask about the community-wide planning process

or disaster relief coalition?

Fourteen respondents said there is no such coalition in their areas.

Three respondents said nothing has happened yet, but a coalition should be formed.

Two said that a disaster planning process is being initiated in their communities now.

Twenty-eight respondents either named someone in the agency who is involved with a community-wide process for disaster planning or described planning activities with other agencies. Of those 28, the level of involvement with a community-wide planning process varied significantly. The following are paraphrased excerpts from those responses:

- * There is a local interagency group looking at this.
- * There are meetings being held at the county government level, and roles and responsibilities of agencies was discussed in the past.
- * One committee was formed to cohesive law & order activities with social services.
- * We have a preparedness committee spearheaded by the Civil Defense person.
- * CAA's are involved with the planning process of, "call us and let us know what you need," but there is no organized plan. There is a Federal Disaster Planning Committee involved.
- * Strategic disaster planning is taking place with strong and active groups.
- * The CAA is not in the planning mode, but someone outside of the agency is involved with a community-wide planning process. (3)
- * A strong coalition of agencies coordinates long-term goals (Town and Gown).
- * One coalition includes 48 agencies working together on disaster planning.
- * Office of Emergency Management has four planners that meet with agencies to help put plans together.
- * Agency is looking at a community-wide 911 system, training, and the county-law-medical connection; does not include strategic planning.
- * Preliminary discussions of how the plans will look.
- * Discussion with Emergency Management team about dispatch frequencies and radio usage; Emergency Management has the plans of who does what.
- * Something is being set up with programs, task force, and VOAD.
- * Discussions have taken place with FEMA, Red Cross, and Civil Defense.
- * There are two Emergency Services Committees for two counties that do disaster planning and define roles and responsibilities.
- * Monthly meetings are taking place with Red Cross, Job Training, and others to provide information on what resources are available.
- * Disaster coordinators are active with the fire department, but not with other groups.
- * Interagency Council of 22 organizations is going strong on disaster planning.
- * Agency is one of several working with Emergency Management team.

Other responses included:

- * No one has done this, it is the job of the Office of Emergency Management.
- * We have not done this because we cannot locate the key players in the community.
- * We deal with the daily disasters of homelessness, poverty, hunger.

Question #16: Do you have written materials regarding disaster relief efforts that you could send to us?

Many agencies were kind enough to forward materials on disaster planning and relief efforts to us. See the Materials Table for a complete list.

Question #17: In addition to those you've named, what other agencies play a major role in your area in:

Disaster relief planning?

Disaster relief services?

Over 50 other agencies were named from all case studies. Only three of the respondents said that there were no other groups that play a major role in their area in disaster relief planning and/or services other than those mentioned. The most frequently-mentioned agency playing such a role was Red Cross. In many cases, respondents listed more than one.

The following table lists the other agencies and how many times that agency was mentioned.

Red Cross (13)	Department of Public Safety (1)
Sheriff (4)	Environmental Agency (1)
County (3)	FEMA (1)
Fire Department (3)	General Services Administration (1)
Health Department (3)	Hospital (1)
Other CAAs (3)	Human Services (1)
Salvation Army (3)	Lawrence Berkeley Laboratory (1)
Utility Companies (3)	Life Sustaining Medical Equip't Registry (1)
Churches (2)	Local Homeless Mission (1)
Civil Defense (2)	Mennonite Disaster Service (1)
County Department of Social Services (2)	Miles-Cutter Laboratory (1)
County Emergency Management (2)	Military (1)
Local Police (2)	Ministerial Association (1)
National Guard (2)	Operation Bootstrap (1)
Schools/School Board (2)	Parks Department (1)
(Self) (2)	Police Jury (1)
Assistance and Referral Program (1)	Public Works Department (1)
Catholic Services (1)	St. Vincent de Paul (1)
City (1)	State (1)
Civic Groups (1)	State Office of Emergency Management (1)
County Administrator's Office (1)	State Office of Volunteerism (1)
County Building and Zoning Department (1)	TAP in Roanoke (1)
County Computer Center (1)	Telephone Company (1)
County Disaster Relief (1)	United Way (1)
County Office of Emergency Services (1)	Water and Sewer Authority (1)

Question #18: In your agency, who can we talk to about the involvement of your **state association** or **state CSBG office** in disaster planning or relief?

We asked this question in part to gauge how many respondents would be able to identify someone within the agency familiar with state level disaster activity. About 30% of the respondents were able to provide the name of someone within the agency familiar with state level disaster activity. Although 45% of the respondents indicated themselves as the person to speak with, many of these respondents said something to the effect of, "Well, I guess that would be me . . .but I don't know that the state level has done anything as far as disaster planning."

A total of 12 respondents were unable to identify such a resource person in the agency, most often because "we haven't done any disaster planning."

Seven respondents provided the name of someone outside of the agency.

Question #19: How has your state association/state CSBG office been involved in disaster planning or assistance?

Fifty-four percent of the agencies surveyed have not talked with their state associations or state CSBG offices about disaster planning or relief. For the remaining 46%, there has been either at least some involvement or the respondent was unable to identify state level activities.

Most agencies said something to the effect of, "When the disaster strikes, we are in touch with them - but there is no planning unless the disaster is happening, and then the involvement becomes a discussion of funding."

Two state CSBG offices indicated that some planning involvement is beginning now, as did one state association.

Disaster Planning and Relief Questionnaire

1. What disaster did your area experience?
2. When did this occur?
3. What types of damage did your community experience?
4. Did your agency experience any damage?
5. Did any of your employees experience damage to their homes or were they injured? What happened?
6. What types of relief did your agency provide?

Food	Rescue Work
Clothing	Rebuilding
Shelter	Emergency Child Care
Transportation	Managing volunteers
Appliances	Supplementary Energy Assistance
Other:	
7. What types of relief did other agencies provide, specifically:
AGENCY - RELIEF
Red Cross -
FEMA -
State Emergency Services Agency -
County Emergency Services Agency -
Salvation Army -
Other: -
8. For about how many months did you provide those services?
9. About how many people were helped by your disaster relief efforts?
10. What percentage of the people you helped were already receiving other services from your agency and what percentage were new people coming to your agency because of the disaster?
Already receiving: %
New: %
11. Did you receive any media coverage for your disaster relief efforts?
12. Would information about your methods help other CAA's to get ready for future disasters?
13. Would you do anything differently next time? What?

14. Has anyone in your agency had discussions with other local or state agencies about planning for future disasters? If yes, who?

15. In your agency, who could we ask about the community-wide planning process or disaster relief coalition?

16. Do you have written materials regarding disaster relief efforts that you could send to us?

17. In addition to those you've named, what other agencies play a major role in your area in:
Disaster relief planning?
Disaster relief services?

18. In your agency, who can we talk to about the involvement of your state association or state CSBG office in disaster planning or relief?

19. How has your state association/state CSBG office been involved in disaster planning or assistance?