

THE DISASTER RESEARCH CENTER  
BOOK AND MONOGRAPH SERIES

20

INVENTORY OF THE DISASTER FIELD STUDIES IN THE  
SOCIAL AND BEHAVIORAL SCIENCES 1919-1979\*

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## Acknowledgments

While almost all Disaster Research Center publications involve the work of many members of the Center, this volume is especially a collective product. More than a decade ago, the Center first thought about compiling an inventory of field studies of disasters. Thus, over the years dozens of disaster events were added to a draft inventory although the work was never put into any form for public use and distribution. Only with a project involving the parallel production of an Inventory of the Japanese Disaster Research Literature in the Social and the Behavioral Sciences, was it possible to bring this intended work to fruition.

Various graduate and undergraduate students through the years worked on compiling the information for this inventory. Especially to be singled out for their effort must be Lou Ann Galloway, Carol Smith Jankowski, Beth Rinard, Catherine Smith, and Martha Woodruff. The typing of the final manuscript and the supervision of its production was done in her usual competent manner by Connie Smith.

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## Explanation of and Guide to the Inventory

In 1961 the Disaster Research Group of the National Academy of Sciences issued a monograph entitled, Field Studies of Disaster Behavior: An Inventory. That monograph was an attempt to provide in one source "a relatively complete list of the field studies on human behavior in disasters that have been conducted by behavioral scientists" (1961: 1). The list included 114 field studies of 103 events which had produced 121 reports.

In the two decades since that monograph there has been an acceleration in the number of field studies which have been undertaken. This reflects the flourishing of disaster research generally. The Academy inventory therefore is considerably out of date. Annotated bibliographies produced in the ensuing years have not had the same objective as an inventory; a gap in the disaster literature consequently exists. Researchers, planners, and others interested in research findings do not have one source which lists all field studies and identifies and locates pertinent publications for specific disaster situations.

While this report builds on the old Academy inventory, it is not merely an extension of that publication. It differs somewhat in both coverage and format. The end product is a result of a series of decisions we had to make in developing our new inventory. It lists and provides relevant information on disaster field studies in the social and behavioral sciences in English language sources and references for more than a sixty year period. The work on our inventory was accomplished as a part of a larger effort at the Disaster Research Center (DRC) which included the production of a companion volume, Inventory of the Japanese Disaster Research Literature in the Social and Behavioral Sciences.

For background purposes, we will note some of the questions addressed, problems faced, and limitations involved in producing our inventory. An original goal, to produce as complete a listing as possible of all known disaster field studies conducted anywhere by social and behavioral scientists, had to be modified. Certain rationale regarding subject and selection process, time frame, and format are now discussed.

First, for a variety of reasons, but mostly because they have rarely been systematically studied in the field by social and behavioral scientists, very diffuse and slowly developing types of disasters, such as famines, droughts and epidemics were excluded from listing consideration. Emphasis in our inventory is on relatively focalized and sudden types of disasters. While our decision excluded some recent studies and publications, it did not exclude in absolute terms very much of a social scientific nature. Much of the work on famines, for example, is of a historical nature, or deals with the topic from a very practical or operational rather than a social science point of view, as illustrated by the types of articles which appear on the topic of famine in the journal Disasters.



Second, we leave out in this first edition all non-English sources. All Japanese language material is presented in the companion inventory previously mentioned. However, while DRC has in its possession a considerable body of non-English sources (it probably has an almost complete set of empirical writings on disasters in Italian, French, and Swedish), translation problems as well as a known incomplete collection in some languages, led us to non-English references in this inventory.

Third, we include in the inventory only studies undertaken by social and behavioral scientists or done within an explicit social and behavioral science research framework. As such, we have left out of the inventory purely historical studies (e.g., Hilda Grieve, The Great Tide, 1959), as well as personal anecdotal accounts (e.g., as typically written by disaster victims), journalistic descriptions (e.g., Polk Laffoon, Tornado: The Killer Tornado That Blasted Xenia, 1975), and agency after action reports (e.g., Mattie Treadwell, Hurricane Carla, 1961). While some of these publications may be more research useful than some social science works, we were primarily interested in including in the inventory only relatively explicit social scientific contributions to the literature.

Social and behavioral sciences were interpreted as including the fields of anthropology, economics, geography, political science, psychology, sociology, and urban planning. Studies from medicine, psychiatry, social work, and marginal areas relevant to the social sciences were only included in the inventory if what they reported was primarily of a social science nature. Thus, medical studies which focus mostly on health and medical aspects of disasters rather than human and social aspects, were excluded from the inventory.

We also arbitrarily decided to systematically include only studies done up to and through 1979. In actuality some field studies done up to and through 1982 are included. It was not possible within our time constraints to insure total coverage after 1979, but we listed as many field studies as came to attention after that year. If the study by Samuel Prince of the Halifax, Nova Scotia, Canada ship harbor explosion which occurred in 1919 is taken as the first systematic social science field study in the disaster area, as it usually is, our inventory systematically includes all the field work done in the first sixty years of work in the area.

Our listings in the inventory are by the major disaster agent involved. For each listing, the full range of field research on any given disaster event is provided. The specific agent categories used are:

- |   |                             |
|---|-----------------------------|
| A. Earthquakes                                | G. Tornadoes                |
| B. Explosions and fires                       | H. Toxicological incidents  |
| C. Floods                                     | I. Transportation accidents |
| D. Hurricanes, typhoons, and<br>severe storms | J. Tsunami                  |
| E. Power system malfunctions                  | K. Volcanic eruptions       |
| F. Snowstorms and blizzards                   | L. Miscellaneous and mixed  |

Again, this aspect of our listing was to a degree arbitrary; the major dimension of the disaster was used for assigning any given event. Thus, a train derailment which led to a dangerous toxic cloud, for example, is listed under toxicological incidents rather than transportation crashes. Explosions and fires, incidentally, are further subdivided into whether they involve building, forest-brush-grass, or other kinds of incidents. Similarly, floods are subdivided: dam, river, flash, or other kinds.

Studies of wartime and military situations, concentration camp behavior, civil disturbances and riots, terrorist activities, and similar conflicts are excluded from the inventory. In this we follow the distinction made in the disaster literature between consensus and dissensus crises and stress situations. We include only consensus kinds of events as disasters, as has become traditional in the disaster literature (for a discussion of the difference between consensus and dissensus types of events see E. L. Quarantelli, "Emergent Accommodation Groups: Beyond Current Collective Behavior Typologies" in Tomatsu Shibutani (ed.), Human Nature and Collective Behavior, 1970). Following a similar logic, field studies of civil defense tests are excluded from the inventory, in contrast to their inclusion along with some wartime studies in the National Academy of Sciences original inventory of Field Studies of Disaster Behavior in 1961.

Specific threat situations, however, resulting from standard disaster agents are included in the inventory as well as actual disaster events. They are included because researchers have found little differences in the two kinds of situations, primarily reflecting a sociological axiom that "if people define a situation as real, it is real insofar as consequences are concerned." On the other hand, none of the numerous studies dealing with disaster preparedness planning are in the inventory since they almost always are not event specific but simply involve discussions of general preparations for a possible disaster. Our interest was only in events with specific time/place parameters.

In our inventory, we otherwise provide a chronological listing of all disaster situations within each of the major disaster agents enumerated above. If an event involved two or more agents, it is listed by the major agent involved which usually but not always is how the event is traditionally identified (e.g., the 1906 San Francisco earthquake rather than fire). No cross-classification of disaster agents is provided.

In our inventory, the following information is provided for each event:

- Major agent involved
- Event name
- Date of occurrence
- Location of event
- A brief narrative on casualties and damages
  - including if there was a federal declaration of disaster for events in the U.S.
- All known reports and publications from study

An event is listed as long as we had information that field work of some kind was undertaken even though no specific report or publication was issued. The undertaking of a field study means that some data were collected even if they still remain specifically unanalyzed. If there are no reports or publications from the study, the name of the organization or the researcher which did the study is included. While no event is listed unless some field work was done, all known reports or publications on that event are provided even if the particular study or data reported did not involve field research. Similarly, studies done long after the disaster event occurred are reported as long as they involved some kind of social science research.

Information provided here is as complete and accurate as we could establish. Some of the material presented, however, has to be approached with a certain amount of caution. For example, as experienced disaster researchers know, casualty figures are estimates at best. The number injured and the amount of property damage can differ by orders of magnitude of two or three depending on which source of information is used. We used those figures which we estimate are the most reliable.

We originally thought of listing the number of interviews obtained in each study, as was done in the original Academy inventory, but eventually rejected the idea because the results could be misleading especially for comparative purposes. For example, almost all interviews by DRC personnel are done face-to-face, involve in-depth probing and often last two to three hours. In contrast, there are studies where the interviews conducted were done over the phone, followed or used a checklist format and lasted no more than five minutes. For certain research purposes, the latter kind of data might be quite valid, but obviously not all interviews obtained in the different studies can be thought of as substantively equivalent.

Reports and publications cited under each event are listed first chronologically and then alphabetically by authors. In the case of non-article references, where known, the number of pages in the text is given. Identical texts which appear in two different sources are normally only listed once; however, somewhat different versions of the same paper or publication are given multiple listings because the additional material or interpretation might be relevant to users of the inventory.

A considerable effort was made to identify all relevant reports and publications. The list (especially before 1980) is probably close to being a complete list of social science references. A major attempt was made to identify writings in other than standard journals and publication outlets, as well as papers presented at major professional meetings. No item was listed in the inventory unless a copy existed in the DRC library or was thought to be available in some other specific location. More than 98 percent of the reports and publications cited were physically seen by the DRC staff who worked on the inventory.

Further editions of this inventory are planned. To allow for the insertion of additional entries in later versions, the pagination of the inventory itself is not consecutive but is alphabetically subdivided by disaster agent. Thus, all earthquake studies are listed on pages numbered A-1, A-2, A-3, etc.; all explosion and fire studies are listed on pages numbered B-1, B-2, B-3, etc.; and so on in each of the major disaster categories from A through L.

Great care has been taken to insure the accuracy of the information presented. Undoubtedly, however, there are errors of omission and commission. Users of this inventory are therefore asked to communicate with DRC upon the discovery of any errors so corrections can be made in future editions.

# SUMMARY TABLE

<u>Disaster Agent</u>	<u>Total # of Events Studied in the Field</u>
A. Earthquake	26
B. Explosion and Fire	48
C. Flood	89
D. Hurricane, Typhoon, and Severe Storm	33
E. Power System Malfunction	4
F. Snowstorm and Blizzard	13
G. Tornado	55
H. Toxicological Incident	35
I. Transportation Accident	27
J. Tsunami	4
K. Volcanic Eruption	6
L. Miscellaneous and Mixed	13
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A-EARTHQUAKE

AGENT: Earthquake  
EVENT: San Francisco Earthquake and Fire  
DATE: April 18, 1906  
LOCATION: San Francisco, California, USA

DESCRIPTION:

The San Francisco earthquake and fire killed 498 people and injured 415 others. Hundreds of fires burned through the city when gas mains broke. The fires lasted for three days and two nights, covering five square miles of the city. Five hundred city blocks were gutted with 28,000 homes destroyed.

REPORTS AND PUBLICATIONS:

James, William

1911 On some mental effects of the earthquake. Pp. 202-226 in William James, Memories and Studies. New York: Longmans Green.

Douty, Christopher Morris

1969 The Economics of Localized Disasters: An Empirical Analysis of the 1906 Earthquake and Fire in San Francisco. Ph.D. dissertation (Economics) Stanford University. 568 pp.

Bowden, Martyn J.

1970 Reconstruction Following Catastrophe: The Laissez-faire Rebuilding of Downtown San Francisco After the Earthquake and Fire of 1906. Proceedings, Association of American Geographers 2: 22-26.

Douty, Christopher Morris

1972 Disaster and charity: some aspects of cooperative economic behavior. American Economic Review 62: 580-590.

Douty, Christopher Morris

1977 The Economics of Localized Disasters: The 1906 San Francisco Catastrophe. New York: Arno Press. 402 pp.

Haas, J. Eugene, Robert W. Kates, and Martyn J. Bowden

1977 Reconstruction Following Disaster. Cambridge, Massachusetts: Massachusetts Institute of Technology Press. 331 pp.

AGENT: Earthquake

EVENT: Earthquake at Hawkes Bay

DATE: September 2, 1931

LOCATION: Hawkes Bay, New Zealand

DESCRIPTION:

230 persons killed in largest earthquake ever to hit the country.

REPORTS AND PUBLICATIONS:

Slade, W. G.

1932 Earthquake psychology. Australian Journal of Psychology and Philosophy 10: 58-63.

Slade, W. G.

1933 Earthquake psychology II. Australian Journal of Psychology and Philosophy 11: 123-133.



**AGENT:** Earthquake  
**EVENT:** Earthquake in Northern India  
**DATE:** January 15, 1934  
**LOCATION:** Bihar, India

**DESCRIPTION:**

The earthquake in Northern India killed 9,040 people and injured many. Several North Bihar towns and districts were isolated for three to four days due to the destruction of communication systems.

**REPORTS AND PUBLICATIONS:**

Prasad, Jamuna

1935 The psychology of rumour: a study relating to the great Indian earthquake of 1934. British Journal of Psychology 26: 1-15.

Prasad, Jamuna

1950 A comparative study of rumors and reports in earthquakes. British Journal of Psychology 41: 129-144.

AGENT: Earthquake  
EVENT: Earthquake in Southern California  
DATE: July 21, 1952  
LOCATION: Kern County, California, USA

DESCRIPTION:

The earthquake centered on Tehachapi, California was the state's most violent tremor since the 1906 San Francisco quake. It destroyed or damaged 150 Tehachapi homes and was felt over a 100,000 square mile area. Fourteen persons were killed; 100 were injured. Property damage amounted to \$60 million.

REPORTS AND PUBLICATIONS:

Loewenberg, Richard D.  
1952 Psychological reactions in an emergency (earthquake).  
American Journal of Psychiatry 109: 384-385.

AGENT: Earthquake  
EVENT: Bakersfield Earthquake  
DATE: August 22, 1952  
LOCATION: Bakersfield, California, USA

DESCRIPTION:

The Bakersfield earthquake killed two people and injured 32 others. Property damages were estimated at \$20 million with damages extending over a 98 block area. The central business district sustained the heaviest destruction. The earthquake did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1953 A Study of Panic: Its Nature, Types, and conditions. M.A. thesis (Sociology) University of Chicago. 168 pp.

1954 A preliminary report on the Bakersfield, California earthquake, August 22, 1952. Pp. 96-103 in E. S. Marks and C. E. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished manuscript. Chicago, Illinois: National Opinion Research Center.

AGENT: Earthquake  
EVENT: Earthquake in Southern Italy  
DATE: August 21, 1962  
LOCATION: Avellino, Italy

**DESCRIPTION:**

The quakes were centered approximately 30 miles northeast of Naples and caused extensive damage to the Southern parts of Italy. The quakes killed a total of 17 people, two people from Avellino. Avellino damages were minimal as compared to those in other areas of Italy.

**REPORTS AND PUBLICATIONS:**

Moss, Leonard W.

1962 Terremoto, 1962. Unpublished rough draft of report. 9 pp.

AGENT: Earthquake

EVENT: Alaskan Earthquake

DATE: March 27, 1964

LOCATION: Anchorage and coastal villages, Alaska, USA

DESCRIPTION:

The Alaskan earthquake registered a magnitude of 8.4-8.6 on the Richter scale and lasted 3 to 4 minutes, affecting 50,000 square miles. The earthquake generated tsunami which were felt by the Alaskan coastal villages, and landslides which caused major damage in Anchorage. The quake killed 116 people in the state, with property damage estimated at \$300 million. In Anchorage, hundreds of homes were destroyed as well as much of the central business district. Parts of Alaska were officially declared disaster areas and the state received \$57 million in federal funding.

REPORTS AND PUBLICATIONS:

Bowman, Karl M.

1964 Alaska earthquake. The American Journal of Psychiatry 121: 313-317.

Yutzy, Daniel

1964 Emergency operations in Anchorage hospitals after the 1964 earthquake. Paper presented at the Conference on Disaster Medical Care, Columbus, Ohio, October 18, 1964. 13 pp.

Dynes, Russell K., J. Eugene Haas, and E. L. Quarantelli

1964 Some Preliminary Observations on the Responses of Community Organizations Involved in the Emergency Period of the Alaskan Earthquake, 1964. Working Paper #2. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 29 pp.

Anderson, William A.

1966 Disaster and Organizational Change: A Study of Some of the Long-Term Consequences of the March 27, 1964 Alaska Earthquake. Ph.D. dissertation (Sociology) The Ohio State University. 250 pp.

Saroff, Jerome R.

1966 Sociology in the reconstruction of Anchorage, Alaska: a missing factor. Pp. 108-114 in Arthur B. Shostak, (ed.) Sociology in Action: Case Studies in Social Problems and Directed Social Change. Homew 1, Illinois: Dorsey.

Kunreuther, Howard and Elissandra Fiore

1966 The Alaskan Earthquake. A Case Study in the Economics of Disaster. Washington, D. C.: Institute for Defense Analysis. 162 pp.

Davis, Nancy Yaw

- 1967 The Role of the Russian Orthodox Church among Five Pacific Eskimo Villages. Working Paper #13. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 54 pp.

Haas, J. Eugene

- 1967 Lessons of the Alaska Earthquake for Coping with Disaster. Working Paper #12. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 29 pp.

Weller, Jack M.

- 1967 Response to Tsunami Warnings in Alaska: The March 1964 Prince William Sound Earthquakes. Working Paper #15. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 20 pp.

Norton, Frank and J. Eugene Haas

- 1967 Alaska Narratives. Working Paper #9. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 70 pp.

Yutzy, Daniel and J. Eugene Haas

- 1967 Disaster and Functional Priorities in Anchorage. Working Paper #14. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 17 pp.

Wilson, Rodman and William Rader

- 1968 Interstate travel and school enrollment after Alaska Good Friday earthquake. Alaska Medicine 10: 48-55.

Adams, David S.

- 1969 Emergency Actions and Disaster Reactions: An Analysis of the Anchorage Public Works Department in the 1964 Alaska Earthquake. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 145 pp.

Anderson, William A.

- 1969 Disaster and Organizational Change: A Study of the Long-Term Consequences in Anchorage of the 1964 Alaska Earthquake. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 89 pp.

Weller, Jack M.

- 1969 The Social Organization of Disaster Response: A Comparative Study. Unpublished thesis (Sociology) The Ohio State University. 113 pp.

Dacy, Douglas C. and Howard Kunreuther

- 1969 The Economics of Natural Disasters: Implications for Federal Policy. New York: The Free Press. 270 pp.

Dynes, Russell R. and E. L. Quarantelli

- 1969 Interorganizational Relations in Communities Under Stress. Working Paper #19. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 11 pp.



- Yutzy Daniel, William A. Anderson, and Russell E. Dynes  
 1969 Community Priorities in the Anchorage Alaska Earthquake, 1964. Monograph #4. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 172 pp.
- Anderson, William  
 1970 Tsunami Warning in Crescent City, California and Hilo, Hawaii. The Great Alaska Earthquake of 1964. Pp. 116-124 in Human Ecology Volume edited by the Committee on the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.
- Davis, Nancy Yaw  
 1970 The Effects of the 1964 Alaska Earthquake on Two Koniag Eskimo Villages. Ph.D. dissertation (Anthropology) University of Washington.
- Davis, Nancy Yaw  
 1970 The role of the Russian Orthodox Church in five Pacific Eskimo Villages as leveled by the earthquake of 1964. Pp. 125-146 in Human Ecology Volume edited by the Committee on the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.
- McLuckie, Benjamin F.  
 1970 A Study of Functional Response to Stress in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.
- Norton, Frank R. B. and J. Eugene Haas  
 1970 The cities and towns: Anchorage, Kodiak, Whittier, Seward, Seldovia, Cordova, Valdez. The Great Alaska Earthquake of 1964. Pp. 248-356 in Human Ecology Volume edited by the Committee of the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.
- Norton, R. B. And J. Eugene Haas  
 1970 The native villages: Kaguyak, Old Harbor, Akhiok, Qu sinkie, Afognak-Port Lions, Chenaga-Tatilik. The Great Alaskan Earthquake of 1964. Pp. 357-399 in Human Ecology Volume edited by the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.
- Yutzy, Daniel and J. Eugene Haas  
 1970 Chronologies of events in Anchorage following the earthquake. The Great Alaskan Earthquake of 1964. Pp. 403-424 in Human Ecology Volume edited by the Committee on the Alaskan Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.

Yutzy, Daniel and J. Eugene Haas

- 1970 Disaster and functional priorities in Anchorage. The Great Alaska Earthquake of 1964. Pp. 90-95 in Human Ecology Volume edited by Committee on the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.

Adams, David, Robert Sta-lings, and Stephen Vargo

- 1970 Natural Disaster and Organizational Change: A Comparative Analysis of Three Cities. Working Paper #30. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 64 pp.

McLuckie, Benjamin F.

- 1977 Italy, Japan, and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disaster Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.

Quarantelli, E. L.

- 1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

Haas, J. Eugene, Robert W. Kates, and Martyn J. Bowden

- 1977 Reconstruction Following Disaster. Cambridge, Massachusetts: Massachusetts Institute of Technology Press. 331 pp.

Ross, G. Alexander

- 1978 Organizational innovation in disaster settings. Pp. 215-232 in E. L. Quarantelli, (ed.) Disasters: Theory and Research. Beverly Hill, California: Sage Publications.



AGENT: Earthquake  
EVENT: Niigata Earthquake  
DATE: June 16, 1964  
LOCATION: Niigata, Japan

DESCRIPTION:

In Niigata, the combination of earthquake and the Shinano River overflow killed 13 persons and injured 315 others. Property damages were estimated at \$26 billion yen, with 3,640 buildings destroyed and approximately 27,000 others severely damaged. Communication and transportation facilities into and out of the city were badly damaged.

REPORTS AND PUBLICATIONS:

- Dynes, Russell R., J. Eugene Haas, and E. L. Quarantelli  
1964 Some Preliminary Observations on Organizational Responses in the Emergency Period after the Niigata, Japan earthquake of June 1964. Working Paper #3. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 48 pp.
- Disaster Research Center  
1968 The lesson of Niigata. Civil Defense Reporter 1: 15.
- McLuckie, Benjamin F.  
1970 A Study of Functional Response to Stress in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.
- Abe, Kitao  
1972 Rumor analysis in the Niigata earthquake. Pp. 166-174 in Proceedings of Organizational and Community Responses to Disasters, Japan-United States Disaster Research Seminar, September 11-15, 1972. Columbus, Ohio: Disaster Research Center, The Ohio State University.
- Takuma, Taketoshi  
1972 Immediate Response at Disaster Sites. Pp. 184-194 in Proceedings of Organizational and Community Responses to Disasters, Japan-United States Disaster Research Seminar, September 11-15, 1972. Columbus, Ohio: Disaster Research Center, The Ohio State University.
- McLuckie, Benjamin F.  
1975 Centralization and natural disaster response: A preliminary hypothesis and interpretations. Mass Emergencies 1: 1-10.

McLuckie, Benjamin F.

- 1977 Italy, Japan and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disaster Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.

Abe, Kitao

- 1978 Levels of trust and reactions to various sources of information in catastrophic situations. Pp. 147-158 in E. L. Quarantelli, (ed.) Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

Takuma, Taketoshi

- 1978 Human behavior in the event of earthquakes. Pp. 159-172 in E. L. Quarantelli, (ed.) Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

AGENT: Earthquake  
EVENT: Earthquake in Northern Chile  
DATE: March 28, 1965  
LOCATION: Northern Areas, Chile

DESCRIPTION:

The Chile earthquake occurred near Santiago and was felt in most of the northern half of the country. Property damage was estimated to be between \$50-100 million. The earthquake left 18,000 people homeless and killed 394 people.

REPORTS AND PUBLICATIONS:

1965 The Chilean Earthquake. Research Memo #18. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Kennedy, Will C.

1971 Earthquake in Chile: A Study of Organizational Response. Working Paper #33. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 32 pp.

AGENT: Earthquake

EVENT: Earthquake in Central Greece

DATE: April 5, 1965

LOCATION: Megalopolis, Central Area, Greece

DESCRIPTION:

The earthquake in Central Greece killed 33 people and injured over 200 others, totally destroying 1,700 homes and damaging 7,000 more. The earthquake left 25,000 people homeless.

REPORTS AND PUBLICATIONS:

1965 The Earthquake in Greece. Research Memo #19. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 2 pp.

AGENT: Earthquake  
EVENT: Earthquake in El Salvador  
DATE: May 3, 1965  
LOCATION: San Salvador, El Salvador

DESCRIPTION:

The San Salvador earthquake killed 150 people and injured 500 others. An estimated 40,000 people were left homeless. Property damage has not been estimated.

REPORTS AND PUBLICATIONS:

1965 Earthquake Disaster in San Salvador, El Salvador. Research Memo #21. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 3 pp.

AGENT: Earthquake  
EVENT: Matsushiro Earthquake  
DATE: August 3, 1965 to 1966  
LOCATION: Matsushiro, Nagano, Japan

DESCRIPTION:

For more than a year Matsushiro experienced 462,781 quakes; thousands of which could be felt. As a result of the frequency of quakes, tourist trade suffered.

REPORTS AND PUBLICATIONS:

Takuma, Taketoshi

1972 Immediate Response at Disaster Sites. Pp. 184-194 in Proceedings of Organizational and Community Responses to Disasters. Japan-United States Disaster Research Seminar, September 11-15, 1972. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Takuma, Taketoshi

1978 Human behavior in the event of earthquakes. Pp. 159-172 in E. L. Quarantelli, (ed.) Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

AGENT: Earthquake  
EVENT: Sicilian Earthquake  
DATE: January 14 - February 5, 1968  
LOCATION: Western Sicily, Italy

DESCRIPTION:

A series of relatively moderate shocks of magnitudes 4.1 to 5.4 occurred at least 17 separate times in a 23 day period. Much physical damage was done with some villages all but completely destroyed. There were 260 known deaths directly attributable to the three most destructive earthquakes. At least 600 were injured, and an estimated 60,000 to 80,000 persons were made homeless when 18,000 dwelling units were destroyed or severely damaged.

REPORTS AND PUBLICATIONS:

- Shipley, Margaret  
1968 Earthquakes in Sicily...a case study of disaster. University of Colorado, College of Engineering Newsletter 11: 32-38.
- Haas, J. Eugene and Robert S. Ayre  
1969 The Western Sicily Earthquake of 1968. Washington, D. C.: National Academy of Sciences. 70 pp.
- McLuckie, Benjamin F.  
1970 A Study of Functional Response in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 208 pp.
- McLuckie, Benjamin F.  
1975 Centralization and natural disaster response: a preliminary hypothesis and interpretations. Mass Emergencies 1: 1-10.
- McLuckie, Benjamin F.  
1977 Italy, Japan and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disaster Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.



AGENT: Earthquake  
EVENT: Ebino Earthquake  
DATE: February 21, 1968  
LOCATION: Ebino, Miyazaki, Japan

DESCRIPTION:

The Ebino earthquake killed three people and injured 45 others. Property damages were extensive, with 386 houses destroyed and 858 severely damaged.

REPORTS AND PUBLICATIONS:

Takuma, Taketoshi

- 1972 Immediate Response at Disaster Sites. Pp. 184-194 in Proceedings of Organizational and Community Responses to Disasters. Japan-United States Disaster Research Seminar, September 11-15, 1972. Columbus, Ohio: Disaster Research Center, The Ohio State University.

Takuma, Taketoshi

- 1978 Human behavior in the event of earthquakes. Pp. 159-172 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage Publications.



AGENT: Earthquake  
EVENT: Earthquake in Iran  
DATE: August 31, 1968  
LOCATION: Northeast Iran

DESCRIPTION:

The Iranian earthquake killed 10,000 people and left 100,000 homeless. It primarily affected Northeastern Iran.

REPORTS AND PUBLICATIONS:

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Disaster Research Center, 1968

AGENT: Earthquake

EVENT: Earthquake in Yugoslavia

DATE: October 1, 1969

LOCATION: Banja Luka, Yugoslavia

DESCRIPTION:

The earthquake in Banja Luka killed 21 people, injured 1,100 others, destroyed 80% of the buildings in the central area, and left 65,000 people homeless.

REPORTS AND PUBLICATIONS:

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Disaster Research Center, 1969

AGENT: Earthquake  
EVENT: Gediz Earthquake  
DATE: March 28, 1970  
LOCATION: Gediz, Turkey

DESCRIPTION:

A major earthquake of Richter magnitude 7.1 occurred in western Turkey, killing 1,086 persons, injuring 1,200 and causing \$23 million in property loss. 9,528 dwellings were destroyed or heavily damaged; parts of Gediz were totally destroyed. All of the city was without water for several days. Structural damage occurred, due to the main shock and fires started with after-shocks short-circuited powerlines.

REPORTS AND PUBLICATIONS:

Mitchell, William A.

1970 Turkish perception of natural hazards: the Gediz Earthquake of March 28, 1970. Paper presented to the Rocky Mountain-Great Plains Division of the Association of American Geographers. The University of Kansas.

Mitchell, William A. and Edward A. Glowatski

1971 Some aspects of the Gediz (Turkey) earthquake. The Journal of Geography 70: 224-229.

Mitchell, William A.

1974 Turkish Villages After an Earthquake: An Analysis of Disaster-Related Modernization. Ph.D. dissertation (Geography) The University of Illinois.

Mitchell, William A.

1975 An analysis of modernization in Turkish villages after an earthquake. Paper presented at the 71st annual meeting of the Association of American Geographers, Milwaukee, Wisconsin.

Mitchell, William A.

1976 Reconstruction after disaster: the Gediz earthquake of 1970. The Geographical Review 66: 296-313.

Mitchell, William A.

1976 Rural reconstruction after an earthquake in a developing country. Paper presented to the 72nd annual meeting of the Association of American Geographers, New York City, New York.

Mitchell, William A.

1977 Partial recovery and reconstruction after disaster: the Lice case. Mass Emergencies 2: 233-247.

German, Aydin

1978 The Gediz earthquake: reconstruction between 1970 and 1977.  
Disasters 2: 69-77.

Mitchell, William A.

1978 Environmental Disaster and Recovery: A Longitudinal Study of  
the 1970 Gediz Earthquake in Western Turkey, Final Report.  
Colorado: U.S. Air Force Academy. 139 pp.

Mitchell, William A.

1978 Post disaster recovery after seven years: old and new Gediz.  
Paper presented to Association of American Geographers, New  
Orleans, Louisiana.

Mitchell, William A. and C. Taylor Barnes

1978 Change after an Earthquake Disaster in Western Anatolia, Colorado:  
Department of Geography, Economics, and Management, The U.S.  
Air Force Academy. 58 pp.

AGENT: Earthquake  
EVENT: Callejon de huaylas Earthquake  
DATE: May 31, 1970  
LOCATION: Huaraz, Callejon de Huaylas, Peru

DESCRIPTION:

The Callejon de Huaylas, a Peruvian Alpine Valley bounded by the 20,000 foot Cordillera Blanca mountains, experienced an earthquake in which an estimated 60,000 people perished. Ninety percent of Huaraz was leveled, killing 20,000 in that city. The earthquake lasted for approximately one minute.

REPORTS AND PUBLICATIONS:

Bode, Barbara

- 1974 Explanation in the 1970 Earthquake in the Peruvian Andes.  
Ph.D. dissertation (Anthropology) Tulane University.

Oliver-Smith, Anthony

- 1974 Yungay Norte: Disaster and Social Change in the Peruvian  
Highlands. Ph.D. dissertation (Anthropology) Indiana University.

Rennie, Drummond

- 1975 Earthquake. Proceedings, Mountain Medicine Symposium, Yosemite  
Institute. 95 pp.

Dudasik, Stephen

- 1976 Community response to shared tragedy: An essay on the disaster  
utopia in northcentral Peru. Florida Journal of Anthropology 1:  
9-15.

Bode, Barbara

- 1977 Disaster, social structure, and myth in the Peruvian Andes:  
The genesis of an explanation. Annals of the New York Academy  
of Sciences 293: 246-274.

Oliver-Smith, Anthony

- 1977 Disaster rehabilitation and social change in Yungay, Peru.  
Human Organization 36: 5-13.

Oliver-Smith, Anthony

- 1977 Traditional agriculture, central places, and postdisaster urban  
relocation in Peru. American Ethnologist 4: 102-116.

Janney, James, Minoru Masuda, and Thomas H. Holmes

- 1977 Impact of a natural catastrophe on life events. Journal of Human  
Stress. Pp. 22-34.

- Dudasik, Stephen W.  
1978 The Socio-Cultural Effects of Natural Disaster in a Peruvian Highland Community. Ph.D. dissertation (Anthropology) University of Florida.
- Oliver-Smith, Anthony  
1979 Post-disaster consensus and conflict in a traditional society: The 1970 avalanche of Yungay, Peru. Mass Emergencies 4: 39-53.
- Oliver-Smith, Anthony  
1979 The Yungay avalanche of 1970: Anthropological perspective on disaster and social change. Disasters 3: 95-101.
- Osterling, Jorge P.  
1979 The 1970 Peruvian disaster and the spontaneous relocation of some of its victims: Ancashino peasant migrants in Huayopampa. Mass Emergencies 4: 117-120.
- Dudasik, Stephen W.  
1980 Victimization in natural disaster. Disasters 4: 329-338.

AGENT: Earthquake

EVENT: Earthquake in Southern California

DATE: February 9, 1971

LOCATION: Los Angeles Area, California, USA

DESCRIPTION:

In Los Angeles an earthquake registering 6.5 on the Richter scale killed 62 people and injured over 1,000 others. The quake involved 200 square miles of the San Gabriel Mountains. Property damages were estimated at \$500 million. Dam damage forced 79,000 people to evacuate their homes for four days. Parts of California were officially declared disaster areas and received \$175 million in federal funding.

REPORTS AND PUBLICATIONS:

Blaufarb, H. and J. Levine

1972 Crisis intervention in an earthquake. Social Work 17: 16-19.

Bourque, Linda Brookover, Leo G. Reeder, Bertram H. Raven, D. Michael Walton and Andrew Cherlin

1973 Evaluations of agency behavior during the Los Angeles earthquake. Paper presented at the 68th Annual Meeting of the American Sociological Association, August 27-30, 1973. 22 pp.

Bourque, Linda Brookover, Leo G. Reeder, Bertram H. Raven, D. Michael Walton and Andrew Cherlin

1973 The Unpredictable Disaster in a Metropolis: Public Response to Los Angeles Earthquake of February, 1971. Survey Research Center, University of California, Los Angeles. 144 pp.

Hoyt, M. F. and B. H. Raven

1973 Birth-order and the 1971 Los Angeles earthquake. Journal of Personality and Social Psychology 28: 123-128.

Bourque, Linda Brookover, Andrew Cherlin and Leo G. Reeder

1976 Agencies and the Los Angeles earthquake. Mass Emergencies 1: 217-228.

Freeling, William and Robert A. Stallings

1976 Collective behavior within a captive population: the response of inmates in a juvenile detention hall to earthquakes. Unpublished manuscript. 19 pp.

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Disaster Research Center, 1971



AGENT: Earthquake  
EVENT: Managua Earthquake  
DATE: December 23, 1972  
LOCATION: Managua, Nicaragua

**DESCRIPTION:**

The first and largest of the three shocks to affect Managua registered a magnitude of 6.2 on the Richter scale and lasted approximately five to ten seconds. The death toll ranged from 4-6,000 lives lost with injuries imposed upon 4% of the population of 420,000. Seventy percent of the population was left homeless with property damage estimated at \$4-600 million.

**REPORTS AND PUBLICATIONS:**

Kates, Robert W., J. Eugene Haas, Daniel J. Amarai, Robert A. Olson, Reyes Ramos, and Richard Olson

1973 Human impact of the Managua earthquake disaster. Science 182: 981-990.

Coultrip, Raymond L.

1974 Medical aspects of U.S. disaster relief operations in Nicaragua. Military Medicine 139: 877-881.

Whittaker, Richard, Donald Fareed, Pedro Green, Patrick Barry, Alejandro Borge, and Raul Fletes-Barrios

1974 Earthquake disaster in Nicaragua: reflections of the initial management of massive casualties. Journal of Trauma 14: 37-43.

Davis, Ian

1975 Disaster housing: a case study of Managua. Architectural Design: 42-47.

Snarr, D. Neil and F. Leonard Brown

1975 Repoert from Managua. South Eastern Latin Americanist 18: 4-5.

Ahearn, Frederick L.

1976 The Impact of a Natural Disaster on Rates of Mental Illness. Chestnut Hill, Maine: Boston College, Graduate School of Social Work. 31 pp.

Ahearn, Frederick L.

1976 Pre and Post-earthquake Admissions to the Nicaraguan National Psychiatric Hospital. Chestnut Hill, Maine: Boston College, Graduate School of Social Work. 34 pp.

Chatterson, I.

1976 Guatemala after the quake. Canadian Journal of Public Health 67: 192-195.



- Osario, I.  
1976 Managua rebuilds a city from earthquake ruins. Geographical Magazine 48: 460-464.
- Trainer, Patricia and Robert Bolin  
1976 Persistent effects of disasters on daily activities: a cross-cultural comparison. Mass Emergencies 1: 279-290.
- Kreimer, Alcira  
1977 Post-Disaster Reconstruction Planning: The Cases of Nicaragua and Guatemala. Cambridge, Massachusetts: Department of Urban Studies and Planning, Massachusetts Institute of Technology. 36 pp.
- Haas, J. Eugene, Robert W. Kates, and Martyn J. Bowden  
1977 Reconstruction Following Disaster. Cambridge, Massachusetts: Massachusetts Institute of Technology Press. 331 pp.
- Kreimer, Alcira  
1978 Post-disaster reconstruction planning: the case of Nicaragua and Guatemala. Mass Emergencies 3: 23-40.
- Bolin, Robert and Patricia Trainer  
1978 Modes of family recovery following disaster: a cross-national study. Pp. 233-247 in E. L. Quarantelli, (ed.) Disasters: Theory and Research. Beverly Hills, California: Sage Publications.
- Bolton, Patricia Ann  
1979 Family Recovery Following a Natural Disaster: The Case of Managua, Nicaragua. Ph.D. dissertation (Sociology) The University of Colorado. 151 pp.
- Ahearn, P. L.  
1981 Disaster mental health: A pre- and post-earthquake comparison of psychiatric admission rates (Nicaragua). Urban and Social Change Review 14: 22-28.

AGENT: Earthquake  
EVENT: Lice Earthquake  
DATE: September 6, 1975  
LOCATION: Lice, Turkey

DESCRIPTION:

The death toll throughout the disaster area was 2,385; 3,339 persons were injured. All of the government and public buildings were destroyed, in addition to 33 houses and 314 commercial and official structures. Early reports of property damage was estimated at between seventeen and eighteen million dollars.

REPORTS AND PUBLICATIONS:

Mitchell, William A.

1977 Partial recovery and reconstruction after disaster: the Lice case. Mass Emergencies 2: 233-247.

AGENT: Earthquake  
EVENT: Guatemalan Earthquake  
DATE: February 4, 1976  
LOCATION: Guatemala City, Guatemala

DESCRIPTION:

The initial Guatemalan earthquake lasted for 39 seconds and registered 7.5 on the Richter scale. The quake killed 22,779 people and seriously injured 76,552. Property damages were estimated at \$1 billion. More than 1 million people were left homeless.

REPORTS AND PUBLICATIONS:

- Carmack, R. M. and C. Cook  
1976 Anthropological Analysis of the Earthquake in Western Guatemala. Guatemala City, Guatemala: Agency for International Development.
- Davis, Ian  
1976 Shelter and Housing Policy in Weeks 1-3 Following the Earthquake, February 4, 1976. Oxford, England: The Research and Development Group, Department of Architecture, Oxford Polytechnic. 213 pp.
- de Ville de Goyet, C. and E. Jeannee  
1976 Epidemiological data on morbidity and mortality following the Guatemala earthquake. IRCS Medical Sciences 4: 212.
- de Ville de Goyet, C. et al  
1976 Earthquake in Guatemala: epidemiologic evaluation of the relief effort. Bulletin of the Pan American Health Organization 10: 95-109.
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1977 Housing and shelter provision following the earthquakes of February 4th and 6th, 1976. Disasters 1: 82-90.
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1977 The Guatemala earthquake of 4 February 1976: case study of a disaster relief agency's operations. Mass Emergencies 2: 83-94.
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1977 Post-disaster Reconstruction Planning: The Cases of Nicaragua and Guatemala. Cambridge, Massachusetts: Department of Urban Studies and Planning, Massachusetts Institute of Technology. 36 pp.
- Lechat, M. F.  
1977 Considerations on health relief, Guatemala earthquake, 1976. Disasters 1: 97-98.

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1977 Earthquake in Guatemala: epidemiological evaluation of the relief effort. Emergency Planning Digest 4: 2-8.
- Olson, R. A. and R. S. Olson  
1977 The Guatemala earthquake of 4 February 1976: social science observations and research suggestions. Mass Emergencies 2: 69-83.
- Weymes, Hazel and Julius Holt  
1977 Rural centre and city slum after the Guatemala earthquake. Disasters 1: 90-97.
- Glass, Roger I., Juan J. Urrutia, Simon Sibony, Harry Smith, Bertha Garcia, and Luis Mizzo  
1977 Earthquake inquiries related to housing in a Guatemalan village. Science 197: 638-643.
- Spencer, Harrison, Arturo Romero, Roger A. Feldman, Carlos Campbell, Otto Zrissig, Eugene Boostrom, E. Croft Long  
1977 Disease surveillance and decision-making after the 1976 Guatemala earthquake. The Lancet: 181-184.
- Mackay, Mary  
1978 The Oxfam/world neighbors housing education program in Guatemala. Disasters 2: 152-157.
- Rogers, David L.  
1978 Issues faced in programming Guatemala disaster rehabilitation assistance: views and impressions of an aging programmer. Mass Emergencies 3: 229-237.
- Taylor, Alan J.  
1978 Disaster housing aid: a program planning model from Guatemala. Disasters 2: 17-23.
- Solomons, Noel W. and Nancy Butte  
1978 A view of the medical and nutritional consequences of the earthquake in Guatemala. Public Health Reports 93: 161-169.
- Romero, Arturo, Rodrigo Cobar, Karl A. Western, and Sergio Mayarga Lopez  
1978 Some epidemiologic features of disasters in Guatemala. Disasters 2: 39-46.
- Bates, Frederick L., W. Timothy Farrell, and JoAnn K. Glittenberg  
1979 Changes in housing characteristics in seventeen Guatemalan communities following the earthquake of 1976. Substantive Report #2, Guatemalan Earthquake Study. University of Georgia. 93 pp.
- Bates, Frederick L., W. Timothy Farrell, and JoAnn Glittenberg  
1979 Emergency food programs following the Guatemalan earthquake of 1976. Substantive Report #13, Guatemalan Earthquake Study. University of Georgia. 31 pp.

- Bates, Frederick L., W. Timothy Farrell, and JoAnn K. Glittenberg  
1979 Some changes in housing characteristics in Guatemala following the February 1976 earthquake and their implications for future earthquake vulnerability. Mass Emergencies 4: 121-133.
- Bates, Frederick L. and John C. Belcher  
1980 Level of living and disasters: level of living following the 1976 Guatemalan earthquake. Substantive Report #5A, Guatemalan Earthquake Study. University of Georgia. 27 pp.
- Bates, Frederick L., W. Timothy Farrell, and JoAnn K. Glittenberg  
1980 Changes in housing patterns in Guatemala associated with the 1976 earthquake as revealed by comparisons between damaged and undamaged communities with a special examination of housing values and their relationship to change. Substantive Report #4, Guatemalan Earthquake Study. University of Georgia. 79 pp.
- Bates, Frederick L., W. Timothy Farrell, and JoAnn K. Glittenberg  
1980 Changes in level of living in Guatemala following the 1976 earthquake as revealed by comparisons between damaged and undamaged communities. Substantive Report #5, Guatemalan Earthquake Study. University of Georgia. 19 pp.



AGENT: Earthquake  
EVENT: Friuli Earthquakes  
DATE: March 6 and September 15, 1976  
LOCATION: Friuli, Italy

DESCRIPTION:

In Friuli, 1,000 people died and many were injured when an earthquake rocked the area. Property damages were extensive, with 17,000 homes destroyed.

REPORTS AND PUBLICATIONS:

Cattarinussi, Bernardo

1977 Some Findings on Social Behavior after the Friuli Earthquake.  
Gorizia, Italy: Institute of International Sociology. 14 pp.

Angatti, Thomas

1978 Playing politics with disaster: the earthquakes of Friuli and  
Belice (Italy). International Journal of Urban and Regional  
Research 1: 329-331.

Barbina, Guido

1979 The Friuli earthquake as an agent of social change in a rural  
area. Mass Emergencies 4: 145-149.

Pelanda, Carlo

1979 Behavioral and Social Tendencies after the Friuli Earthquake:  
State of the System. Gorizia, Italy: Institute of International  
Sociology. 5 pp.

Hogg, Sarah Jane

1980 Reconstruction following seismic disaster in Venzone, Friuli.  
Disasters 4: 173-185.

AGENT: Earthquake  
EVENT: Philippine Earthquake and Tsunami Disaster  
DATE: August 17, 1976  
LOCATION: Mindono, Philippines

DESCRIPTION:

The damaging effects of the earthquake and Tsunami caused an estimated 5,820 dead and missing persons. Approximately 85% of the dead and 65% of the injured were victims of the tsunami waves. More than 55,000 were left homeless; 10,000 houses were damaged.

REPORTS AND PUBLICATIONS:

Haas, J. Eugene  
1977 The Philippine earthquake and tsunami disaster: a re-examination of behavioral propositions. Disasters 2: 3-11.

AGENT: Earthquake  
EVENT: Izu Oshima Earthquake  
DATE: January 14, 1978  
LOCATION: Izu Peninsula, Japan

DESCRIPTION:

A major earthquake followed by aftershocks killed 13 persons and inflicted widespread property damage. In several areas, the water supply was disrupted and in another place cynaide flowed into several rivers.

REPORTS AND PUBLICATIONS:

Akimoto, Ritsuo and Hideaki Ohta

1978 Rumor and organizational reponse in the Izu Oshima earthquake of 1978. Paper presented at the 9th World Congress of Sociology in Uppsala, Sweden, August 17, 1978. 14 pp.

Institute for Future Technology

1978 Interim report on the results of the questionnaire survey on the earthquake which hit the sea near Izu Oshima, Shikzuoka Prefecture, 1978. Unpublished paper.



AGENT: Earthquake  
EVENT: Tabas-E-Golshan Earthquake  
DATE: September 16, 1978  
LOCATION: Tabas-E-Golshan, Iran

DESCRIPTION:

The earthquake which shocked the Kharassan Province in east central Iran severely damaged 90 villages, slightly damaged 50 villages, and completely demolished the town of Tabas. Eleven thousand of 13,000 people were killed in this community. Total fatalities numbered 20,000. The earthquake destroyed over 15,000 housing units and 30 underground water canals.

REPORTS AND PUBLICATIONS:

Berberian, Manuel  
1979 Tabas-E-Golshan (Iran) catastrophic earthquake of 16 September 1978, a preliminary field report. Disasters 2: 207-219.

B-EXPLOSION AND FIRE

AGENT: Explosion  
EVENT: Mount Kembla Mine Explosion  
DATE: July 31, 1902  
LOCATION: Wollongong, Australia

DESCRIPTION:

The Mount Kembla mine explosion was caused by a fall of waste material which released a cloud of inflammable matter which was ignited by a miner's lamp. The explosion blocked the main entrance and killed 96 of the 261 men that were in the mine at the time. One third of the village's male population over 14 years of age was killed.

REPORTS AND PUBLICATIONS:

Mitchell, Glenn and Stuart Piggin

1977 The Mount Kembla mine explosion of 1902: towards the study of the impact of a disaster on a community. The Journal of Australian Studies 1: 52-69.

AGENT: Explosion

EVENT: Halifax Harbor Munition Ship Explosion

DATE: December 6, 1917

LOCATION: Halifax, Nova Scotia, Canada

DESCRIPTION:

The Halifax munition ship explosion killed 2,000 people, injured 6,000 and left 10,000 homeless as it burned two and one-half square miles of the city.

REPORTS AND PUBLICATIONS:

Prince, Samuel Henry

1920 Catastrophe and Social Change. New York: Columbia University.  
147 pp.

AGENT: Fire - Building  
EVENT: Cocoanut Grove Nightclub Fire  
DATE: November 28, 1942  
LOCATION: Boston, Massachusetts, USA

DESCRIPTION:

A fire in an overcrowded night club where there were perhaps 1,000 patrons, trapped a number of them, killing 489 and injuring 166 others. Many died from asphyxiation, some from the panic flight.

REPORTS AND PUBLICATIONS:

Faxon, N. W. and E. D. Churchill

1942 The Cocoanut Grove disaster in Boston: A preliminary account. Journal American Medical Association 120: 1385-1388.

Adler, Alexander

1943 Neuropsychiatric complications in victims of Boston's Cocoanut Grove disaster. Journal of the American Medical Association 123: 1098-1101.

Cobb, Stanley and Erich Lindemann

1943 Neuropsychiatric observations following the Cocoanut Grove disaster. Annals of Surgery 117: 814-824.

Veltfort, Helene Rank and George E. Lee

1943 The Cocoanut Grove fire: a study in scapegoating. Journal of Abnormal and Social Psychology 38: 138-154.

Lindemann, Erich

1944 Symptomatology and management of acute grief. American Journal of Psychiatry 101: 141-148.

AGENT: Explosion  
EVENT: Texas City Explosion  
DATE: April 16-17, 1947  
LOCATION: Texas City, Texas, USA

DESCRIPTION:

The "Grandchamp," a tanker carrying ammonium nitrate, caught fire and exploded, causing a nearby Monsanto Plant to burn. Approximately 4,000 people were injured and 512 people were killed as a result of the two fires. Property damages were estimated at \$76 million.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis Killian, and Wyatt Marrs  
1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 138 pp.

AGENT: Fire - Building  
EVENT: Dormitory Fire  
DATE: December 3, 1949  
LOCATION: Norman, Oklahoma, USA

DESCRIPTION:

A fire broke out in a men's dormitory at the University of Oklahoma and killed three students.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis Killian, and Wyatt Marrs  
1952 A Study of the Effects of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 138 pp.



AGENT: Explosion  
EVENT: Ammunition Barge Explosion  
DATE: May 19, 1950  
LOCATION: South Amboy, New Jersey, USA

DESCRIPTION:

Barges loaded with 468 tons of ammunition blew up at the Pennsylvania Railroad Docks in South Amboy. Only 4 bodies out of 31 were recovered and more than 350 injuries were sustained. The explosion rained thousands of anti-personnel bombs on the town. Nearly every home in the town of 9,000 was damaged or destroyed, and windows were broken as far away as Brooklyn, 15 miles from the scene.

REPORTS AND PUBLICATIONS:

Green, J. B. And L. Logan

1950 The South Amboy Disaster. Chevy Chase, Maryland: Operations Research Office.

AGENT: Explosion  
EVENT: Industrial Plant Explosion  
DATE: February 8, 1951  
LOCATION: St. Paul, Minnesota, USA

DESCRIPTION:

An explosion in the Minnesota Mining and Manufacturing Company plant killed 14 people and injured approximately 50 others. Damage to the plant alone was \$1 million; windows were shattered in stores and factories within an 8-block radius of the explosion.

REPORTS AND PUBLICATIONS:

1954 Minneapolis Mining and Manufacturing Company plant explosion. Pp. 104-113 in E. S. Marks, C. E. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished Manuscript. Chicago, Illinois: National Opinion Research Center.

AGENT: Fire  
EVENT: Dormitory Fire  
DATE: April 28, 1951  
LOCATION: Maryville, Missouri, USA

DESCRIPTION:

An explosion set off a fire in a dormitory at a women's residence hall at Northwest Missouri College, and a few students were injured.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis Killian, and Wyatt Marrs  
1952 A Study of the Effects of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 138 pp.

AGENT: Explosion and Fire  
EVENT: Kansas City Fires from Floods  
DATE: July 12-17, 1951  
LOCATION: Kansas City, Missouri, USA

DESCRIPTION:

The Kansas floods, caused oil storage tanks to be thrown against high tension lines, resulting in explosions and fires which lasted for several days. Three people were killed and many were injured by the fires. Property damages were estimated at \$1 million.

REPORTS AND PUBLICATIONS:

Killian, L. M.

1952 Firefighters in battle. Unpublished paper. Chevy Chase, Maryland: Operations Research Office. 20 pp.

University of Oklahoma Research Institute

1952 The Kansas City Flood and Fire of 1951. Chevy Chase, Maryland: Operations Research Office. 40 pp.

Killian, L. M.

1955 Firemen in the Kansas City flood-fire disaster. Paper presented at the annual meeting of the American Sociological Association, Washington, D. C. 6 pp.

AGENT: Fire  
EVENT: Forest Fire  
DATE: September 20, 1951  
LOCATION: Forks, Washington, USA

DESCRIPTION:

The Forks forest fire burned through 15,000 acres of timberland, resulting in over \$1 million in property damages. The fire destroyed 19 homes, a tourist camp, and a lumber mill. There were no casualties.

REPORTS AND PUBLICATIONS:

Larsen, Otto N.

1954 Rumors in a disaster; observation of the rumors and concomitant factors in a disaster situation. Journal of Communication 4: 111-123.

AGENT: Explosion  
EVENT: Brighton Gas Main Explosion  
DATE: September 21, 1951  
LOCATION: Brighton, New York, USA

DESCRIPTION:

Brighton, a Rochester, New York suburb, experienced a series of gas line explosions for a duration of two hours. Property damage was estimated at \$1 million with 19 homes destroyed and 25 others damaged. The explosion killed three people and injured 30 others.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

- 1953 A Study of Panic: Its Nature, Types, and Conditions. M.A. Thesis (Sociology) University of Chicago. 168 pp.
- 1953 Report on a series of house explosions in Brighton, New York, September 21, 1951. Pp. 126-163 in Conference on Field Studies of Reactions to Disasters. Chicago, Illinois: National Opinion Research Center.
- 1954 Report on a series of house explosions in Brighton, New York, September 21, 1951. Pp. 21-58 in E. S. Marks, C. E. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished manuscript. Chicago, Illinois: University of Chicago.

AGENT: Explosion

EVENT: Fireworks Plant Explosion

DATE: June 5, 1953

LOCATION: Houston, Texas, USA

DESCRIPTION:

An explosion in a fireworks plant killed four and injured 96 as well as deamaging 30 homes in the neighborhood.

REPORTS AND PUBLICATIONS:

Killian, Lewis

1956 A Study of Response to the Houston, Texas Fireworks Explosion.  
Washington, D. C.: Committee on Disaster Studies, National  
Academy of Sciences. 25 pp.



AGENT: Explosions and Fire  
EVENT: West Frankfort Mine Explosion  
DATE: December 21, 1951  
LOCATION: West Frankfort, Illinois, USA

DESCRIPTION:

The West Frankfort mine explosion killed 120 of the 218 men working the shift.

REPORTS AND PUBLICATIONS:

Gordon, Archer S. and Frank Raymon

1952 Report of the mine explosion disaster. Medical Laboratories  
Special Report #12. Maryland: Army Chemical Center. 12 pp.

Gordon, Archer S. and Frank Raymon

1953 Report on the West Frankfort, Illinois mine explosion,  
December 21, 1951. Pp. 110-125 in Conference on Field Studies  
of Reactions to Disasters. Chicago, Illinois: National Opinion  
Center.

1954 Report on the West Frankfort, Illinois mine explosion, December  
21, 1951. Pp. 59-75 in E. S. Marks, C. E. Fritz et al., Human  
Reactions in Disaster Situations, Volume 3. Unpublished manu-  
script. Chicago, Illinois: National Opinion Research Center.

AGENT: Explosion

EVENT: Ship Explosion and Fires

DATE: May 26, 1954

LOCATION: U.S.S. Bennington, USA

DESCRIPTION:

An explosion and fire aboard the U.S. aircraft carrier Bennington killed 102 persons and injured 203.

REPORTS AND PUBLICATIONS:

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Committee on Disaster Studies, 1954

AGENT: Explosion  
EVENT: Fireworks Plant Explosion  
DATE: July 16, 1954  
LOCATION: Chestertown, Maryland, USA

DESCRIPTION:

Eleven persons were killed during a series of explosions which occurred during a two-hour interval. Fire, in addition to the explosions, demolished 35 of the plant's 60 buildings. Scores of townspeople were injured by flying debris.

REPORTS AND PUBLICATIONS:

Rayner, Jeanette F.

1954 Suggestion for research in Chestertown disaster. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 12 pp.

AGENT: Fire - Building  
EVENT: Arundel Park Hall Fire  
DATE: January 29, 1956  
LOCATION: Brooklyn, Maryland, USA

DESCRIPTION:

The Arundel Park Hall fire killed 11 persons and injured about 250 others. The hall had been rented for a church function and contained from 1,100 to 1,200 persons.

REPORTS AND PUBLICATIONS:

- Bryan, John L.  
1957 A Study of the Survivors: Reports on the Panic in the Fire at the Arundel Park Hall in Brooklyn, Maryland on January 29, 1956. College Park: Fire Protection Curriculum, University of Maryland. 11 pp.
- Bryan, John L.  
1958 Psychology of panic. Paper presented at the 30th annual Fire Department Instructors Conference, Memphis, Tennessee, February 18-21, 1958.

AGENT: Explosion and Fire  
EVENT: Springhill Mine Explosion  
DATE: November 1, 1956  
LOCATION: SpringHill, Nova Scotia, Canada

DESCRIPTION:

The Springhill mine explosion and fire trapped and killed 36 men. Three bodies were removed from the debris and the remaining 88 men were rescued on November 5.

REPORTS AND PUBLICATIONS:

Weil, R. J. and F. A. Dunsworth  
1958 Psychiatric aspects of disasters - a case history - some experiences during the Springhill, Nova Scotia mining disaster. Canadian Psychiatric Association Journal 3: 11-17.

AGENT: Explosions and Fire

EVENT: Gasoline Tanker Explosion

DATE: March 7, 1957

LOCATION: Delaware River near Newcastle, Delaware, USA

DESCRIPTION:

A gasoline tanker collided with a freighter, resulting in a series of explosions, killing 10 people and injuring several more.

REPORTS AND PUBLICATIONS:

Leopold, R. L. and Harold Dillon

1963 Psycho-anatomy of a disaster: a long term study of post-traumatic neuroses in survivors of a marine explosion. American Journal of Psychiatry 119: 913-921.

AGENT: Explosion  
EVENT: Roseburg Explosion  
DATE: August 7, 1959  
LOCATION: Roseburg, Oregon, USA

DESCRIPTION:

An explosion in Roseburg killed 13 people and injured 125 others. Property damages were estimated at \$12 million, as the explosion leveled seven city blocks and damaged 28 others.

REPORTS AND PUBLICATIONS:

Greene, Mark R.

1963 Risk management in a catastrophe. Eugene, Oregon: Small Business Study, University of Oregon. 27 pp.

Greene, Mark R.

1964 The effect of insurance settlements in a disaster. The Journal of Risk and Insurance 31: 381-391.



AGENT: Explosion and Fire  
EVENT: Tanker Ship Fire  
DATE: November 8, 1959  
LOCATION: Houston, Texas, USA

DESCRIPTION:

Eight persons were killed when a fire started aboard the American Oil Company tanker ship, Amoco Virginia, as petroleum products were being loaded. Explosions followed immediately and spread the flames.

REPORTS AND PUBLICATIONS:

Moore, Harry E.

1959 Houston channel ship fire. Unpublished report. Austin, Texas: Department of Sociology, University of Texas. 19 pp.

AGENT: Explosion  
EVENT: Coliseum Explosion  
DATE: October 31, 1963  
LOCATION: Indianapolis, Indiana, USA

DESCRIPTION:

An explosion occurred in the state fairgrounds coliseum during a "Holiday on Ice" performance, killing 81 persons and injuring more than 400 others. The initial explosion was followed by a second explosion of lesser intensity and a small fire. Aside from burns, casualties resulted from uprooted chunks of concrete. There was no official declaration of disaster.

REPORTS AND PUBLICATIONS:

- Drabek, Thomas E. and E. L. Quarantelli  
1967 Scapegoats, Villains, and Disasters. Trans-action 4: 12-17.
- Drabek, Thomas E.  
1968 Disaster in Aisle 13: A Case Study of the Coliseum Explosion at the Indiana State Fairgrounds, October 31, 1963. Columbus, Ohio: College of Administrative Science, The Ohio State University. 187 pp.
- Drabek, Thomas E. and E. L. Quarantelli  
1969 Blame in disaster: Another look, another viewpoint. Pp. 604-615 in Dwight Dean (ed.), Dynamic Social Psychology. New York: Random House.
- Adams, David, Robert Stallings, and Stephen Vargo  
1970 Natural Disaster and Organizational Change: A Comparative Analysis of Three Cities. Working Paper #30. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 64 pp.
- Ross, Alexander G.  
1978 Organizational innovation in disaster settings. Pp. 216-232 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

AGENT: Fire - Building  
EVENT: Nursing Home Fire  
DATE: November 23, 1963  
LOCATION: Fitchville, Ohio, USA

DESCRIPTION:

The Golden Age Nursing Home burned to the ground killing 63 of the 84 patients.

REPORTS AND PUBLICATIONS:

Anderson, William and E. L. Quarantelli

1964 A Description of Organizational Activities in the Fitchville, Ohio Nursing Home Fire. Research Note #8. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 17 pp.

AGENT: Explosion  
EVENT: Explosion in Chemical Plant  
DATE: January 12, 1964  
LOCATION: Attleboro, Massachusetts, USA

DESCRIPTION:

Toxic smoke from an explosion in the Thompson Chemical Plant caused the deaths of seven persons and injured 40 persons. Residents within a one-mile radius of the plant were evacuated due to threat of further explosions. Property damage was estimated at over \$3 million.

REPORTS AND PUBLICATIONS:

Yutzy, Daniel

- 1964 Some Organizational Community Activities after an Explosion at the Thompson Chemical Company, Attleboro, Massachusetts. Research Note #2. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 18 pp.
- 1964 The Attleboro, Massachusetts Explosion. Research Memo #6. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Fire - Forest Fire  
EVENT: Forest Fire in California  
DATE: September 22, 1964  
LOCATION: Santa Barbara, California, USA

DESCRIPTION

The Coyote Forest Fire burned for approximately ten days, killing one person and injuring 47. Destruction was extensive: property damage estimated at \$20 million, and 80,000 acres of watershed and 78 homes were damaged or destroyed. The fire threatened Santa Barbara but was controlled before reaching its limits.

REPORTS AND PUBLICATIONS:

1964 The Coyote Forest Fire, Santa Barbara, California. Research Memo #13. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Quarantelli, E. L.

1971 A Description of the Actions of the Forest Service in the Coyote Forest Fire near Santa Barbara, California in September 1964. Working Paper #36. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 13 pp.

Adams, David

1974 A Description and Analysis of a Radio Station Operation During a Forest Fire. Preliminary Paper #14. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 17 pp.

AGENT: Explosion  
EVENT: Apartment House Explosion  
DATE: March 1, 1965  
LOCATION: Montreal, Quebec, Canada

DESCRIPTION:

An apartment house outside of Montreal's city boundaries exploded killing 27 persons and injuring 29. The explosion destroyed totally the three-story building and damaged several surrounding buildings.

REPORTS AND PUBLICATIONS:

Adams, David

- 1965 The 1965 Montreal Canada Apartment House Explosion: Some Notes and Comparisons with the Indianapolis Coliseum Explosion. Research Report #14. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 24 pp.
- 1965 Apartment House Explosion in Ville-Lasalle, Montreal, March 1, 1965. Research Memo #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Explosion

EVENT: Fire Resulting from Gas Main Explosion

DATE: January 13, 1967

LOCATION: Jamaica, New York, USA

DESCRIPTION:

No casualties or injuries resulted from the gas main explosion in Queens, New York. However, the explosion led to fires which encompassed a six block area, destroyed nine houses and severely damaged eight others.

REPORTS AND PUBLICATIONS:

Kennedy, Will C.

1967 The Jamaica, Queens New York Explosion and Fire. Research Report #18. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

AGENT: Fire - Brush  
EVENT: Hobart Bushfires  
DATE: February 7, 1967  
LOCATION: Hobart, Tasmania, Australia

DESCRIPTION:

Within 5 hours over one-half million acres burned, leaving 62 people dead, many injured, 1,085 homes destroyed and 2,500 people homeless.

REPORTS AND PUBLICATIONS:

- Anderson, William A. and Robert Whitman  
1967 A Few Preliminary Observations on 'Black Tuesday': The February 7, 1967 Fires in Tasmania, Australia. Research Report #19. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 32 pp.
- Wettenhall, R. L. and J. M. Power  
1969 & Bureaucracy and disaster. Public Administration 8: 263-277 and  
1970 9: 165-188.
- Wettenhall, R. L.  
1975 Bushfire Disaster: An Australian Community in Crisis. Sydney, Australia: Angus and Robertson. 320 pp.
- Leivesley, Sally  
1980 The social consequences of Australian disasters. Disasters 4: 30-37.



AGENT: Fire - Building

EVENT: Fire in the Cabaret Playtown in Tokyo

DATE: March 13, 1967

LOCATION: Tokyo, Japan

DESCRIPTION:

A nightclub fire killed 118 persons, 22 of them as a result of jumping from the building. There were only 61 survivors in the nightclub which was on the seventh floor of a department store. The fire never reached the club; victims died from carbon monoxide poisoning or a result of jumping.

REPORTS AND PUBLICATIONS:

Abe, Kitao

1976 The behavior of survivors and victims in a Japanese nightclub fire. Mass Emergencies 1: 119-124.

AGENT: Explosion

EVENT: Store Explosion Resulting in Fires

DATE: April 6, 1968

LOCATION: Richmond, Indiana, USA

DESCRIPTION:

An explosion in a sporting goods store resulted in a fire which encompassed two city blocks of the downtown Richmond business district. The fire killed 41 and injured over 100 persons.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1968

AGENT: Explosion

EVENT: Lima Oil Pipeline Explosion

DATE: January 13, 1969

LOCATION: Lima, Ohio, USA

DESCRIPTION:

An oil pipeline explosion forced 6,000 residents to evacuate their homes as small fires developed; however, these were quickly extinguished. Property damage was estimated at \$185,000.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Explosion

EVENT: Railway Tank Car Explosion

DATE: January 25, 1969

LOCATION: Laurel, Mississippi, USA

DESCRIPTION:

Railway tank cars exploded killing two persons and injuring 35. Property damage was estimated at over \$3 million; 54 residences were destroyed.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Fire - Brush  
EVENT: Brush Fire in Southern California  
DATE: October 1, 1970  
LOCATION: Southern California, USA

DESCRIPTION:

A series of brush fires in Southern California killed 13 persons and injured over 350 others. Property damage was estimated at \$200 million. Parts of Southern California were officially declared disaster areas and received \$16 million in federal funding.

REPORTS AND PUBLICATIONS:

Forrest, Thomas Robert

1972 Structural Differentiation in Emergent Groups. Ph.D. dissertation (Sociology) The Ohio State University. 197 pp.

Jensen, Carl

1972 The Use and Abuse of Media in the Aftermath of a Disaster: An Analysis of the 1970 Southern California Fires. M.A. thesis (Sociology) University of California Santa Barbara. 72 pp.

Forrest, Thomas Robert

1974 Structural Differentiation in Emergent Groups. Report Series #15. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 111 pp.

AGENT: Explosion and Fire  
EVENT: Sunshine Mine Fire  
DATE: May 2, 1972  
LOCATION: Kellogg, Idaho, USA

DESCRIPTION:

An explosion and a flash fire in a mine killed 91 miners, making it the worst disaster in the state's history.

REPORTS AND PUBLICATIONS:

Jarrett, Stanley M.

1972 Major Mine Fire Disaster: Sunshine Mine. Final report.  
Alameda, California: Metal and Nonmetal Mine Health and  
Safety, Western District. 175 pp.

Harvey, Carol D.

1975 Initial responses to disaster: reaction to fire and flood.  
Paper presented at the Pacific Sociological Association  
Meetings, April 17, 1975. Victoria, British Columbia, Canada.

AGENT: Fire - Building  
EVENT: Great Chelsea Conflagration  
DATE: October 14, 1973  
LOCATION: Chelsea, Massachusetts, USA

DESCRIPTION:

This fire in Chelsea destroyed 18 city blocks, damaged 12 others and left property damage figures in the millions. No casualties resulted, however, five firemen were injured while trying to control the blaze. With official declaration of disaster, \$1.5 million in federal funding was allocated.

REPORTS AND PUBLICATIONS:

Blanshan, Sue and Marvin Hershisier  
1973 Some Observations on Fire Departments' Response to a Massive Fire in Chelsea, Massachusetts, October 14, 1973. Working Paper #56. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 5 pp.

AGENT: Fire - Forest Fire  
EVENT: Chatauqua Fire  
DATE: January 1975  
LOCATION: Chatauqua (pseudonym), Ohio, USA

DESCRIPTION:

A blaze on a mountainside combined with winds ranging up to 130 miles per hour to threaten the community of Chatauqua. The residents were forced to evacuate when firefighters believed the blaze to be uncontrollable. The winds shifted and died down, however, the fire was extinguished. There were no casualties and damage was minimal.

REPORTS AND PUBLICATIONS:

Wolf, Charlotte

1975 Group perspective formation and strategies of identity in a post threat situation. Sociological Quarterly 16: 401-414.



AGENT: Explosion  
EVENT: North Bay Explosion  
DATE: January 8, 1975  
LOCATION: North Bay, Ontario, Canada

DESCRIPTION:

The Barry Building of North Bay exploded at 3:30, killing 8 people and injuring 39. The two story office building reeked of gas throughout the day and occupants of the building as well as passersby commented on the smell, however, no official action was taken.

REPORTS AND PUBLICATIONS:

- Scanlon, Joseph and Brian Taylor  
1975 The warning smell of gas. Field Report 75/2. Ottawa, Canada: Emergency Planning Canada. 16 pp.
- Erickson, Bonnie H., T. A. Nosanchuk, Liviana Mostacci, and Christina Ford Dalrymple  
1975 The flow of crisis information as a probe of work relations. Unpublished paper. 38 pp.
- Erickson, Bonnie H., T. A. Nosanchuk, Liviana Mostacci, and Christina Ford Dalrymple  
1976 Responses to disaster: the urban bush telegraph in North Bay. Unpublished paper. 54 pp.
- Erickson, Bonnie H., T. A. Nosanchuk, Liviana Mostacci, and Christina Ford Dalrymple  
1978 The flow of crisis information as a probe of work relations. Canadian Journal of Sociology 3: 71-87.

AGENT: Explosion  
EVENT: Alberta TNT Explosion  
DATE: April 21, 1975  
LOCATION: Alberta, Canada

DESCRIPTION:

The accidental detonation of 3,000 pounds of nitroglycerine-based explosives claimed the lives of six men; three persons were seriously injured. Homes over a mile away were shaken by the blast and showering debris.

REPORTS AND PUBLICATIONS:

Ponting, J. Rick  
1976 Human behavioral reactions to an accidental explosion: a test of a sociological theory of panic. Alberta, Canada: Department of Sociology, The University of Calgary. 78 pp.

AGENT: Explosion  
EVENT: Chlorine Gas Explosion in Tank Car  
DATE: December 14, 1975  
LOCATION: Niagara Falls, New York, USA

DESCRIPTION:

Explosion of a tanker car containing chlorine gas released toxic fumes which killed six persons and injured 87. Property damage was primarily contained within the Hooker Chemical Plant, the location of the explosion.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Explosion

EVENT: LaGuardia Airport Bombing

DATE: December 29, 1975

LOCATION: Queens, New York, USA

DESCRIPTION:

A bomb explosion in the TWA baggage claim area at the LaGuardia airport terminal killed 11 persons and injured 60 others.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Explosion  
EVENT: Gas Explosion in Hotel  
DATE: January 10, 1976  
LOCATION: Fremont, Nebraska, USA

DESCRIPTION:

A gas leak was the apparent cause of the explosion that ripped through the first and second floors of the Pathfinder Hotel, killing 20 persons and injuring 41.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Fire - Building  
EVENT: Fire in Nursing Home  
DATE: January 30, 1976  
LOCATION: Chicago, Illinois, USA

DESCRIPTION:

A one room fire in the Winecrest Nursing and Rest Home created dense smoke that killed 13 persons and injured 32 others. All resident victims of the fire suffered from smoke inhalation.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Fire - Building  
EVENT: Fort Garry Court Apartment Fire  
DATE: February 2, 1976  
LOCATION: Winnipeg, Manitoba, Canada

DESCRIPTION:

Five people died and two were injured as a result of the fire which devastated the Ft. Garry apartment complex. Many lost their possessions in the fire. Huge amounts of water used to fight the fire left their mark, as frigid weather conditions coated the building and rubble with ice.

REPORTS AND PUBLICATIONS:

Scanlon, Joseph and David Tait

1976 The Fort Garry Court Fire. Field Report 76/4. Ottawa, Canada:  
Emergency Planning Canada. 19 pp.

Scanlon, Joseph

1979 Human behavior in a fatal apartment fire--research problems and findings. Fire Journal 73: 76-79, 122-123.

AGENT: Explosion and Fire  
EVENT: Ammonia Tanker Explosion  
DATE: May 11, 1976  
LOCATION: Houston, Texas, USA

DESCRIPTION:

A tanker carrying liquid ammonia killed 5 people when it exploded after crashing off an overpass onto a freeway. Two hundred people were overcome by the resulting toxic fumes.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.



AGENT: Fire - Building  
EVENT: The Great Sakata Fire  
DATE: October 29, 1976  
LOCATION: Nakamachi and Nibancho, Japan

DESCRIPTION:

A fire in a movie house spread to a department store and eventually burned 1,017 houses. While there was only one death, 746 people were injured.

REPORTS AND PUBLICATIONS:

Abe, Kitao  
1976 The Psychological Analysis of the Evacuating Behavior at the Great Sakata fire. 36 pp.

AGENT: Explosion and Fire

EVENT: Queens Explosion

DATE: November 21, 1976

LOCATION: Queens, New York, USA

DESCRIPTION:

An explosion at the Warner-Lambert Company killed one person and injured 55 others.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Fire - Building  
EVENT: Goulds Fire  
DATE: December 26, 1976  
LOCATION: Goulds, Newfoundland, Canada  
DESCRIPTION:

A fire in a Goulds nursing home killed 21 persons.

REPORTS AND PUBLICATIONS:

Scanlon, Joseph with Darlene Harapiak and Mary Lou Tsario  
1977 The Goulds fire emergency communications in Newfoundland.  
Ottawa, Canada: Emergency Planning Canada. 28 pp.

AGENT: Fire - Building  
EVENT: Beverly Hills Nightclub Fire  
DATE: May 28, 1977  
LOCATION: Southgate, Kentucky, USA

DESCRIPTION:

A fire in the Beverly Hills Supper Club killed 164 people and injured 100 others. Toxic fumes were responsible for the majority of deaths and injuries. The nightclub was completely destroyed with an estimated \$2 million in damages.

REPORTS AND PUBLICATIONS:

Best, Richard L.

1977 Reconstruction of a Tragedy: The Beverly Hills Supper Club Fire. Boston, Massachusetts: National Fire Protection Association. 113 pp.

Hoyle, John D.

1977 The Beverly Hills Club disaster. Emergency Medical Services 6: 50-51, 54-56.

Lindy, Jacob, Jessica Murdaugh, Joanne Zaleski, and James Titchener

1977 A psychiatric response to disaster: the Beverly Hills fire. Cincinnati, Ohio: Department of Psychiatry, University of Cincinnati. 25 pp.

Swartz, J. A.

1979 Human behavior in the Beverly Hills fire. Fire Journal 73: 73-74.

Green, B.

1981 Prediction of Long-Term Impairment among Survivors of the Beverly Hills Fire. Ph.D. dissertation University of Cincinnati.

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters: Assumption and Reality. New York: Irvington Press.

AGENT: Explosion and Fire  
EVENT: Mansfield Plant Explosion  
DATE: September 19, 1977  
LOCATION: Mansfield, Ohio, USA

DESCRIPTION:

The Mansfield Plating Company was threatened by cyanide gas explosions when the plant caught fire. The gas did not explode; however, two neighboring plants were evacuated as well as 300-400 residents as a precautionary measure. Three people were injured as a result of the fire.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1977

C-FLOOD

C-1

AGENT: Flood - River  
EVENT: Louisville Flood  
DATE: January 24, 1937  
LOCATION: Louisville, Kentucky, USA

DESCRIPTION:

Louisville was one of the worst hit regions along the Ohio River Valley, where a total of 200,000 persons evacuated their homes because of the river overflow.

REPORTS AND PUBLICATIONS:

Breaux, Gustave A.

1937 1937 flood at Louisville. The Filson Club History Quarterly 11: 109-119.

Kutak, Robert I.

1938 The sociology of crises: the Louisville flood of 1937. Social Forces 17: 66-72.

AGENT: Flood - River  
EVENT: Flood in Illinois  
DATE: 1942  
LOCATION: Shawneetown, Illinois, USA

DESCRIPTION:

In a major flood, 1,700 were left homeless for six weeks.  
Property damage was at least \$2 million.

REPORTS AND PUBLICATIONS:

Janes, R. W.

1942 The Collective Action Involved in the Removal and Relocation  
of Shawneetown, Illinois. Ph.D. dissertation (Sociology)  
University of Illinois.

Janes, R. W.

1959 A study of a natural experiment in community action. Pp. 157-  
172 in M. Sussaman (ed.), Community Structure and Analysis.  
New York: Crowell.



AGENT: Flood - River  
EVENT: Kansas-Missouri Floods  
DATE: July 10-14, 1951  
LOCATION: Eastern Kansas and Western Missouri, USA

DESCRIPTION:

The Kansas-Missouri floods were a result of heavy rains that developed into a major disaster when the Kansas River crested on July 13. The floods killed 41 people and caused extensive property damage in Manhattan, Topeka, and Lawrence, Kansas. Kansas City's stockyards and industrial lowlands were inundated. Property damages were estimated at \$750 million to \$1 billion. Parts of Kansas and Missouri were officially declared disaster areas and received \$17 million in federal funding.

REPORTS AND PUBLICATIONS:

Kelly, Hubert, Jr.

1952 Disaster rehousing. Urban Land 11: 3-7.

Menninger, W. C.

1952 Psychological reactions in an emergency (flood). American Journal of Psychiatry 109: 128-130.

AGENT: Flood - River  
EVENT: Northeast Oklahoma Flood  
DATE: July 10-17, 1951  
LOCATION: Miami, Oklahoma, USA

DESCRIPTION:

No casualties resulted from the Neosha River flood. Adequate preparation and evacuation kept damage at a minimum. Miami was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

Hudson, Bradford B.

1952 Observations in a community during a flood. Unpublished manuscript. Houston, Texas: Rice Institute. 11 pp.

AGENT: Flood - Other  
EVENT: English Floods  
DATE: February 1, 1953  
LOCATION: Southeastern Coast of England

DESCRIPTION:

North Sea storms and high spring tides inundated the southeastern coast of England, killing 307 people. Approximately 250,000 acres were flooded.

REPORTS AND PUBLICATIONS:

- Balloch, J. C.  
1953 Military Operations in the Netherlands-East Anglia Flood Disasters. Chevy Chase, Maryland: Operations Research Office. 64 pp.
- Balloch, J. C.  
1953 Some psychological aspects of disaster studies. Unpublished paper. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 25 pp.
- Balloch, J. C.  
1953 U.S. Air Force assistance in the East Anglia flood disaster. Pp. 1-7 in Studies in Military Assistance in Civilian Disasters: England and the U.S. Unpublished Report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.
- Logan, Leonard  
1953 Report on England's 1953 flood disaster. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 148 pp.
- Young, Michael  
1953 Kinship at Convey, a note on the evacuation of flood victims from Convey Island. Unpublished report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 10 pp.
- Young, Michael  
1953 The spare hat principle. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences-National Research Council. 6 pp.
- Young, Michael  
1954 The role of the extended family in a disaster. Human Relations 7: 383-391.
- Spiegel, J. P.  
1957 The English flood of 1953. Human Organization 16: 3-5.

AGENT: Flood - Other  
EVENT: Holland Floods  
DATE: February 1, 1953  
LOCATION: Southwest Netherlands

DESCRIPTION:

North Sea storms and high spring tides inundated 1,500 square miles or one-sixth of Holland, killing 1,783 people. The floods forced 70,000 people to evacuate their homes. Property damages were estimated at \$260 million.

REPORTS AND PUBLICATIONS:

- Balloch, J. C.  
1953 Military Operations in the Netherlands-East Anglia Flood Disasters. Chevy Chase, Maryland: Operations Research Office. 64 pp.
- Hauerda, J. L.  
1953 The social results of the flood. Maandblad voor de Volksgezondheid 8: 185-206.
- Keur, Dorothy  
1953 Reaction of Netherlands Flood Disaster on Dutch People in Safe Areas. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.
- Ludwig, Harvey F.  
1953 The Holland Flood Disaster - February, 1953 - Sanitary Engineering Aspects. Paper presented at the Committee on Sanitary Engineering and Environment, National Academy of Sciences, Washington, December 1953.
- Gijsbers, J. H.  
1954 Some Individual Psychological Remarks to the Study of Social Disorganization at Zieriksee. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.
- Ludwig, Harvey F.  
1954 Sanitary engineering in 'Operation Tulip.' Public Health Reports 69: 533-537.
- Courtney, D., J. C. Balloch, H. F. Ludwig, and Elizabeth Bowen  
1954 Operation Tulip: A Study of the Military Contributions to the Netherlands Flood Disaster. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 51 pp.

**AGENT:** Flood - River  
**EVENT:** Rio Grande river Flood in Mexico  
**DATE:** June 27-30, 1954  
**LOCATION:** Piedras Negras, Mexico

**DESCRIPTION.**

The Rio Grande River crested at 37.6 feet above the flood stage in Piedras Negras, inundating 85 percent of the city, killing 130 people and injuring 4,000 others. Property damage was extensive with 1,350 buildings destroyed and another 2,850 damaged.

**REPORTS AND PUBLICATIONS:**

- Clifford, Roy A.  
1954 Operation Rio Grande. Preliminary Progress Report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 10 pp.
- Clifford, Roy A.  
1955 Informal Group Actions in the Rio Grande Flood. Unpublished report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 89 pp.
- Clifford, Roy A.  
1955 The Rio Grande Flood: A Comparative Study of Border Communities in Disaster. Washington, D. C.: National Academy of Sciences. 152 pp.
- Loomis, Charles P. and W. H. Form  
1956 The persistence and emergence of social and cultural systems in disaster. American Sociological Review 21: 180-185.

AGENT: Flood - River  
EVENT: Rio Grande River Flood in the U.S.  
DATE: June 27-30, 1954  
LOCATION: Eagle Pass, Texas, USA

DESCRIPTION:

In Eagle Pass, 360 people were injured, 55 buildings destroyed and another 325 damaged when the Rio Grande River inundated 55 percent of the town. There were no casualties in the community. However, the flood involved much of the southwestern parts of Texas and parts of Mexico where loss of life and property damages were greater. Parts of the state of Texas were officially declared disaster areas and Texas received \$877,500 in federal funding.

REPORTS AND PUBLICATIONS:

Clifford, Roy A.

1954 Operation Rio Grande. Preliminary Progress Report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 10 pp.

Clifford, Roy A.

1955 Informal Group Actions in the Rio Grande Flood. Unpublished report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 89 pp.

Clifford, Roy A.

1955 The Rio Grande Flood: A Comparative Study of Border Communities in Disaster. Washington, D. C.: National Academy of Sciences. 152 pp.

Loomis, Charles P. and W. H. Form

1956 The persistence and emergence of social and cultural systems in disaster. American Sociological Review 21: 180-185.

AGENT: Flood - River  
EVENT: Farmington Flood  
DATE: August 18, 1955  
LOCATION: Farmington, Connecticut, USA.

DESCRIPTION:

In Connecticut, 6,000 persons were evacuated, 691 homes were destroyed and 10,455 were damaged as a result of flooding. The flooding was due to 14 inches of rainfall within a period of 36 hours. In Farmington, over 300 families were evacuated, 130 homes were destroyed and 240 were damaged. Parts of the state of Connecticut were officially declared disaster areas and received \$1 million in federal funding.

REPORTS AND PUBLICATIONS:

Klausner, Samuel Z. and Harry V. Kincaid  
1956 Social Problems of Sheltering Flood Evacuees. New York:  
Bureau of Applied Social Research, Columbia University. 175 pp.

AGENT: Flood - Dam  
EVENT: Port Jervis False Dam Burst Report  
DATE: August 19, 1955  
LOCATION: Port Jervis, New York, USA

DESCRIPTION:

Officials estimated that between 2,500 and 3,000 persons evacuated as a result of a false report of a dam burst. No casualties or destruction occurred, and Port Jervis was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

Danzig, E. R., P. W. Thayer, and Lila R. Galanter  
1958 The Effects of a Threatening Rumor on a Disaster-Stricken  
Community. Washington, D. C.: National Academy of Sciences.  
116 pp.



AGENT: Flood - Other  
EVENT: Tampico Hurricane Floods  
DATE: September 30, 1955  
LOCATION: Tampico, Mexico

DESCRIPTION:

Three hurricanes hit Tampico in September, killing 3,000 people and injuring many others. The first occurred on the fourth and caused the evacuation of thousands of persons from the lower parts of the city. The second occurred on the 19th of September, and struck the city directly, crippling it for several days. The third occurred on September 30. Although it did not hit the city directly, massive flooding completely isolated Tampico from the rest of the nation. Approximately 60,000 of the 114,000 inhabitants were left homeless, with 4,800 homes destroyed and 6,500 severely damaged.

REPORTS AND PUBLICATIONS:

DeHoyos, Arturo

1956 The Tampico Disaster. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 34 pp.

AGENT: Flood - Dam  
EVENT: Norwalk Flood  
DATE: October 15-16, 1955  
LOCATION: Norwalk, Connecticut, USA

DESCRIPTION:

In Norwalk, a succession of dams collapsed after a heavy rainfall of 13 inches. The flooding resulted in four deaths and extensively damaged parts of Connecticut, with losses estimated at \$8 million. Parts of the state were previously under federal declaration of disaster due to a hurricane and torrential rains and floods in August. The state received \$1 million in federal funding.

REPORTS AND PUBLICATIONS:

Weisman, Seymour S.

1958 Case Study of a Flood-Stricken City. New York: Graduate School of Public Administration and Social Service, New York University, 149 pp.

AGENT: Flood - Dam  
EVENT: Threat of Dam Burst  
DATE: October 16, 1955  
LOCATION: Schenectady, New York, USA

DESCRIPTION:

Summer torrential rains and floods brought threat of a dam burst in Schenectady. However, the structure held and little actual damage occurred. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

Boek, W. E. and Jean K. Boek  
1956 An exploratory study of reactions to an impending disaster.  
Unpublished report. Albany, New York: New York State Department of Health.

AGENT: Flood - River  
EVENT: California Flood  
DATE: December 19-23, 1955  
LOCATION: Yuba City, California, USA

DESCRIPTION:

Floods due to heavy rain and snow caused extensive damage to several Northwestern and Central states, killing 61 persons and injuring 3,227, destroying 633 buildings, and damaging another 2,475. In California 39 persons were killed, with Yuba City experiencing the heaviest loss of life. Parts of California, Oregon, and Nevada were officially declared disaster areas, and California received \$7,666,293 in federal funding.

REPORTS AND PUBLICATIONS:

Blum, Richard H. and Bertrand Klass

1956 A Study of Public Response to Disaster Warnings. Washington, D. C.: National Academy of Sciences, National Research Council. 176 pp.

Stiles, William W.

1957 How a community met a disaster: Yuba City flood, December 1955. Annals of the American Academy of Political and Social Sciences 309: 160-169.

AGENT: Flood - River

EVENT: Trinity River Flood

DATE: Winter, 1955-1956

LOCATION: Hupa Reservation, Northwest California, USA

DESCRIPTION:

One person was killed and several were injured when the Trinity River overflowed, destroying homes and trailers. The Hupa Reservation was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

Bushnell, John H.

1969 Hupa reaction to the Trinity River floods: post-hoc recourse to aboriginal belief. Anthropological Quarterly 42: 316-324.

AGENT: Flood - River  
EVENT: River Flood in Dallas  
DATE: April 19-27, 1957  
LOCATION: Dallas, Texas, USA

DESCRIPTION:

A series of tornadoes, rain storms, and resulting floods affected Dallas, Ft. Worth, and other cities in Texas, killing eleven persons. Federal disaster declaration was affirmed as a result of the April 2 tornado.

REPORTS AND PUBLICATIONS:

Moore, H. E. and H. J. Friedsam  
1958 Formal and informal social systems in a disaster situation.  
Paper presented at the annual meeting of the American Sociological Association, Seattle, Washington. 11 pp.

AGENT: Flood - River

EVENT: Floods in Mexico and the U.S.

DATE: September, 1958

LOCATION: Abram, Texas and Reynosa, Mexico

DESCRIPTION:

Concurrent flooding in Texas and Mexico

REPORTS AND PUBLICATIONS:

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Arturo de Hoyos, et al., 1958

AGENT: Flood - River

EVENT: Texas Floods

DATE: November, 1960

LOCATION: Central Texas, USA

DESCRIPTION:

A series of floods killed four people and injured 34.

REPORTS AND PUBLICATIONS:

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Wiley Mangum and Harry Moore, 1960



AGENT: Flood - River

EVENT: Flood on the Rio Grande

DATE: November, 1960

LOCATION: Villa (pseudonym), Lower Texas Valley, USA

DESCRIPTION:

While there were no casualties, a flood forced evacuation of many in a small town.

REPORTS AND PUBLICATIONS:

Stoddard, Ellwyn

1961 Catastrophe and Crisis in a Flooded Border Community: An Analytic Approach to Disaster Emergencies. Ph.D. dissertation (Sociology) Michigan State University. 191 pp.

AGENT: Flood - Dam  
EVENT: Dam Collapse  
DATE: July 12, 1961  
LOCATION: Panshet, Poona, India

DESCRIPTION:

In Poona, 750 homes were destroyed and 1,650 were damaged when the earthen embankment of the Panshet Dam collapsed, forcing 10,000 families to evacuate.

REPORTS AND PUBLICATIONS:

Pundalik, V. G. and Smt. Sunanda Patwardhan

1962 A note on the behavior of the caste in a crisis situation.  
Sociological Bulletin (India) 2: 69-72.

Grimshaw, Allen D.

1964 The impact of natural disaster on governmental bureaucracies in three cultural settings. Paper presented at the annual meetings of the American Sociological Association, Montreal, 1964. 21 pp.

Grimshaw, Allen D.

1964 The Poona, India disaster study. Unpublished manuscript. Bloomington, Indiana: Department of Sociology. 64 pp.

Grimshaw, Allen D.

1965 Social structure, disaster, and re-integration: the case of Poona. Working draft of paper to be presented at the annual meetings of the American Sociological Association, San Francisco, 1965. 27 pp.

Brahme, Sulabha and Prakesh Gole

1967 Deluge in Poona: Aftermath and Rehabilitation. Bombay, India: Asia Publishing House. 146 pp.

AGENT: Flood - Dam  
EVENT: Overflow of Vaiont Dam  
DATE: October 9, 1963  
LOCATION: Longarone, N. E. Italy

DESCRIPTION:

In the village of Longarone approximately 2,000 people were killed and a few were injured when the Vaiont Dam overflowed, almost completely destroying the village and nearby hamlets. The flood resulted in almost total destruction for almost two miles across the valley and about four miles along its length. Hundreds of homes and factories were destroyed, as were several bridges and miles of railroad tracks.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L. and J. Eugene Haas

1963 A Preliminary Report on the Vaiont Dam Disaster. Working paper #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 38 pp.

Quarantelli, E. L.

1970 The Vaiont Dam Overflow. A Case Study of Extra-community Response in Massive Disasters. Research report #24. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Quarantelli, E. L.

1977 The Vaiont Dam overflow: A case study of extra-community responses in massive disasters. Disasters 3: 199-212.

AGENT: Flood - Dam  
EVENT: Baldwin Hills Dam Break  
DATE: December 14, 1963  
LOCATION: Los Angeles, California, USA

DESCRIPTION:

The Baldwin Hills dam break caused the deaths of four persons and extensive destruction in a one-square mile residential area, destroying 64 homes and forcing hundreds of Baldwin Hills residents to evacuate. Property damages were estimated at \$10 million. Baldwin Hills was officially declared a disaster area and received \$1.6 million in federal funding.

REPORTS AND PUBLICATIONS:

Anderson, William

1964 The Baldwin Hills, California dam disaster. Research Note #5. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 19 pp.

1964 The Baldwin Hills, California Dam Break. Research Memo #5. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - River  
EVENT: Flood Threat in Cincinnati  
DATE: March 11, 1964  
LOCATION: Cincinnati, Ohio, USA

DESCRIPTION:

Heavy rains in the Ohio River Valley brought flood threats to Cincinnati, causing 870 people to be evacuated. There were no casualties reported in the city, and the rains caused minimal damage. Parts of the state of Ohio were officially declared disaster areas and received \$575,108 in federal funding.

REPORTS AND PUBLICATIONS:

1964 Flood at Cincinnati, Ohio. Research Memo #7. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Anderson, William

1965 Some Observations on a Disaster Subculture: The Organizational Response of Cincinnati, Ohio to the 1964 Flood. Research Note #6. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 25 pp.

Parr, Arnold

1969 A brief view on the adequacy and inadequacy of disaster plans and preparations in ten community crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Parr, Arnold

1970 Organizational response to community crisis and group emergence. American Behavioral Scientist 13: 423-429.

AGENT: Flood - River  
EVENT: Great Falls Flood  
DATE: June 9, 1964  
LOCATION: Great Falls, Montana, USA

DESCRIPTION:

Evacuation efforts in the Great Falls area of Montana began on June 8, 1964. No casualties and few injuries resulted from the Missouri River overflow occurring on June 9. Property damage was estimated at \$16.5 million. Parts of the state of Montana were officially declared disaster areas and received \$7.8 million in federal funding.

REPORTS AND PUBLICATIONS:

Yutzy, Daniel

- 1964 Authority, jurisdiction, and technical competence: interorganizational relationships at Great Falls, Montana during the flood of June 8-10, 1964. Research Note #7. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 22 pp.
- 1964 The Montana Flood, June 8-12, 1964. Research Memo #9. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - River  
EVENT: Rio Grande Flood  
DATE: September 25, 1964  
LOCATION: Laredo, Texas, USA

DESCRIPTION:

The Rio Grande River crested at 36 feet above the flood stage, causing minimal damage at its peaking point in Laredo, flooding only four homes. Approximately 2,500 people evacuated, however, no casualties or injuries occurred.

REPORTS AND PUBLICATIONS:

Hundley, James

1965 / Some research questions and planning implications raised by observations made at a flood threat in Laredo, Texas and Nuevo Laredo, Mexico, September 25, 1964. Research Report #12. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 14 pp.

AGENT: Flood - River  
EVENT: Rio Grande Flood  
DATE: September 26, 1964  
LOCATION: Neuvo Laredo, Mexico

DESCRIPTION:

In Laredo, minimal property damage resulted from the rains which threatened a Rio Grande flood. Four homes in the outlying areas were destroyed. There was no official declaration of disaster.

REPORTS AND PUBLICATIONS:

Hundley, James

- 1965 Some research questions and planning implications raised by observations made at a flood threat in Laredo, Texas and Nuevo Laredo, Mexico, September 25, 1964. Research Report #12. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 15 pp.
- 1965 Rio Grande Flood Threat, Texas and Mexico. Research Memo #10. Columbus, Ohio: The Disaster Research Center, The Ohio State University.



AGENT: Flood - River  
EVENT: Northern California Floods  
DATE: December 21, 1964  
LOCATION: Northern California, USA

DESCRIPTION:

Throughout California, Oregon, Washington, and Idaho; 45 people were killed and 2,000 injured. The property damage amounted to \$1 billion. With official declaration of disaster, \$56.7 million in federal funding was allotted to the four states. Northern California was most affected and received \$37.6 million.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1964

AGENT: Flood - Flash

EVENT: Trinity River Flash Flood

DATE: Winter, 1964-1965

LOCATION: Hupa Reservation, Northwestern California, USA

DESCRIPTION:

Flash flooding of lowland areas on the Hupa Indian Reservation resulted in no casualties or injuries. Minimal property damage and highway washouts occurred. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

Bushnell, John H.

1969: Hupa reaction to the Trinity River floods: post-hoc recourse to aboriginal belief. Anthropological Quarterly 42: 316-324.

**AGENT:** Flood - River  
**EVENT:** Mankato Flood  
**DATE:** April 9, 1965  
**LOCATION:** Mankato, Minnesota, USA

**DESCRIPTION:**

Many North Central Plain states were involved in a series of floods and tornadoes that killed 31 persons and injured 1,269. Damages were extensive, with the destruction of 388 dwellings and another 2,828 damaged. In Mankato 7,500 persons were forced to evacuate when the Mississippi River crested at 29.07 feet above flood stage. Estimated damages for the community were \$5.5 million. Parts of Minnesota were officially declared disaster areas and received \$9,588,776 in federal funding.

**REPORTS AND PUBLICATIONS:**

1965 Floods and Tornadoes in Northern Midwest. Research Memo #20. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Heller, Jack M. and Dennis Wenger

1972 Some Observations on the Concept of Disaster Subculture. Working paper #48. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 7 pp.

AGENT: Flood - River  
EVENT: St. Paul Flood  
DATE: April 16, 1965  
LOCATION: St. Paul, Minnesota, USA

DESCRIPTION:

Many North Central Plain states were involved in a series of floods and tornadoes that killed 31 persons and injured 1,269. Damages were extensive, with the destruction of 388 dwellings and another 2,828 damaged. The Mississippi River crested at 26.2 feet above flood stage in St. Paul and was the major source of destruction in Minnesota. Estimated state-wide damage amounted to \$80 million, and parts of Minnesota were officially declared disaster areas. Minnesota was the only state granted federal aid and received \$9.6 million.

REPORTS AND PUBLICATIONS:

- 1965 Floods and Tornadoes in Northern Midwest, April 1965. Research Memo #20. Columbus, Ohio: The Disaster Research Center, The Ohio State University.
- Boggins, Mary Merritt  
1966 Red Cross Public Relations Problems, Policies, and Operations in a Disaster-Stricken Area. M.A. thesis (Journalism) The Ohio State University. 227 pp.

AGENT: Flood - River

EVENT: Colorado Flood

DATE: June 16, 1965

LOCATION: Central and Southern Colorado, USA

DESCRIPTION:

Two streams of flood waters from the Palmer Lake Area resulted in flooding over most of Central and Southern Colorado, killing 24 persons and injuring 622. Property damage was estimated at \$500 million, with 1,715 homes and businesses damaged or destroyed. Parts of Colorado were officially declared disaster areas and received \$19.7 million in federal funding.

REPORTS AND PUBLICATIONS:

1965 The Colorado Floods, June 16-19, 1965. Research Memo #22. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Borger, Larry J.

1967 Municipal Government Responsibilities in Disaster Situations with Special Reference to the Littleton, Colorado Flood of June 16, 1965. M.A. thesis (Public Administration) University of Kansas.

Stephenson, John

1967 An Analysis of Family and Individual Reactions to Flood Warnings. M.A. thesis (Sociology) University of Denver.

Drabek, Thomas E. and Keith S. Boggs

1968 Families in disaster: reactions and relatives. Journal of Marriage and the Family: 443-451.

Drabek, Thomas E.

1969 Social processes in disaster: family evacuation. Social Problems 16: 337-349.

McLuckie, Benjamin F.

1970 The Study of Functional Response to Stress in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 208 p.

Drabek, Thomas E. and John S. Stephenson III

1971 When disaster strikes. Journal of Applied Social Psychology 1: 187-203.

AGENT: Flood - River

EVENT: Red River Valley Flood

DATE: April 5, 1966

LOCATION: Grand Forks, North Dakota, USA

DESCRIPTION:

One person was killed and 1,500 were forced to evacuate their homes. Property damage amounted to \$10 million. With official declaration of disaster, \$1 million was allotted in federal funding.

REPORTS AND PUBLICATIONS:

1966 Red River Valley Flood. Research Memo #27. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 3 pp.

AGENT: Flood - River  
EVENT: Arno River Flood  
DATE: November 4, 1966  
LOCATION: Florence and Northern Italy  
DESCRIPTION:

In Northern Italy 116 people were killed and many injured when the Po, Adige, and Arno Rivers overflowed their banks. The flood waters affected one-third of the country and caused \$1.6 billion in property damages. In Florence, many famous works of art were damaged or destroyed by the flood waters.

REPORTS AND PUBLICATIONS:

Koff, Stephen P.

1967 Fall guys in the Florentine flood. Trans-Action 4: 25-27.

McLuckie, Benjamin F.

1970 A Study of Functional Response in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 208 pp.

McLuckie, Benjamin F.

1975 Centralization and natural disaster response: a preliminary hypothesis and interpretations. Mass Emergencies 1: 1-10.

McLuckie, Benjamin F.

1977 Italy, Japan, and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical Series #1. Columbus Ohio: The Disaster Research Center, The Ohio State University. 130 pp.

AGENT: Flood - River

EVENT: Fairbanks Flood

DATE: August 15, 1967

LOCATION: Fairbanks, Alaska, USA

DESCRIPTION:

The Chena River overflow caused the deaths of five persons, injured some, and forced the evacuation of 16,000 residents. Property damages were estimated at \$200 million. Fairbanks was officially declared a disaster area and received \$7.3 million in federal funding.

REPORTS AND PUBLICATIONS:

Warheit, George J.

1968 The Impact of Major Emergencies on the Functional Integration of Four American Communities. Ph.D. dissertation (Sociology) The Ohio State University. 270 pp.

Parr, Arnold R.

1969 A brief view on the adequacy and inadequacy of disaster plans and preparations in ten community crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold R.

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crisis. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Weller, Jack

1969 The Social Organization of Disaster Response: A Comparative Study. M.A. thesis (Sociology) The Ohio State University. 113 pp.

Parr, Arnold

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-424.

Warheit, George J.

1976 A note on natural disasters and civil disturbances: similarities and differences. Mass Emergencies 1: 131-137.

Quarantelli, E. L.

1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.



AGENT: Flood - River

EVENT: Taunton Flood

DATE: March 21, 1968

LOCATION: Taunton, Massachusetts, USA

DESCRIPTION:

No casualties resulted from the flood, however, hundreds of people were evacuated from their homes. Property damage amounted to \$2.5 million. No official declaration of disaster was made.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1968

AGENT: Flood - River  
EVENT: Hocking County Flood  
DATE: June 4, 1968  
LOCATION: Athens/Hocking County, Ohio, USA

DESCRIPTION:

Three people died, and few were injured when 4.3 inches of rain fell in a period of 24 hours, causing the Hocking River to overflow. Ohio University students were forced to evacuate their dormitories. Property damage amounted to \$8.8 million. With official declaration of disaster, \$1 million was allotted in federal funding.

REPORTS AND PUBLICATIONS:

1968 The Athens, Ohio Flood. Research Memo #32. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 2 pp.

AGENT: Flood - Other  
EVENT: Bristol Floods  
DATE: July 10, 1968  
LOCATION: Bristol, England

DESCRIPTION:

In a matter of twelve hours, rain fell and flooded 3,000 houses shops, and other properties. The peak of the rainfall coincided with a high spring tide which blocked the outflow into the river. The water spread over extensive low-lying areas in the southern part of the city.

REPORTS AND PUBLICATIONS:

Bennet, Gila

1970 Bristol Floods 1968--controlled survey of effects on health of local community disaster. British Medical Journal 3: 454-457.

**AGENT:** Flood - Dam  
**EVENT:** Flood in Waterloo  
**DATE:** July 17, 1968  
**LOCATION:** Waterloo, Iowa, USA

**DESCRIPTION:**

No casualties resulted from a dam bursting due to heavy rains. Nine to fifteen inches of rain forced several hundred persons to evacuate their homes for the night. Approximately 500 homes were damaged. Waterloo was not officially declared a disaster area.

**REPORTS AND PUBLICATIONS:**

1968 : Waterloo, Iowa Flood. Research Memo #33. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 3pp.

AGENT: Flood - Other  
EVENT: South African Flood  
DATE: September 1, 1968  
LOCATION: Port Elizabeth, South Africa

DESCRIPTION:

During the monsoon, 22 inches of rain fell on Port Elizabeth in a 24 hour period. The ensuing flood killed eight people, injured many, and caused extensive property damage.

REPORTS AND PUBLICATIONS:

Strumpfer, D. J. W.  
1970 Fear and affiliation during a disaster. Journal of  
Social Psychology 82: 263-268.

AGENT: Flood - River  
EVENT: Flood in Northwestern Italy  
DATE: November 4, 1968  
LOCATION: Northwest Italy

DESCRIPTION:

Widespread flooding in Northwestern Italy resulted in the deaths of approximately 74-93 persons and caused massive property damages throughout the area. Eighty factories were damaged, 20 of which were totally destroyed.

REPORTS AND PUBLICATIONS:

McLuckie, Benjamin F.

1970 : A Study of Functional Response to Stress in Three Societies.  
Ph.D. dissertation (Sociology) The Ohio State University.  
275 pp.

McLuckie, Benjamin F.

1975 Centralization and natural disaster response: A preliminary hypothesis and interpretations. Mass Emergencies 1: 1-9.

McLuckie, Benjamin F.

1977 Italy, Japan, and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disasters Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.

AGENT: Flood - Other  
EVENT: California Flood, Mud-slides  
DATE: January 23, 1969  
LOCATION: Los Angeles, California, USA

DESCRIPTION:

Torrential rains spawned by a Pacific storm swept across the state of California for nine days, severely damaging parts of the state. The combined agents of flood and mud-slide killed 91 persons, left 9,000 homeless, and caused \$35 million in property damages. In Los Angeles, property damages were estimated at \$5 million. Parts of the state of California were officially declared disaster areas and received \$113.4 million in federal funding.

REPORTS AND PUBLICATIONS:

Parr, Arnold Richard

1969 A Brief View on the Adequacy and Inadequacy of Disaster Plans and Preparations in Ten Community Crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold Richard

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Brouillette, John R.

1970 Community Organizations Under Stress: A Study of Interorganizational Communication Networks During Natural Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 210 pp.

Parr, Arnold Richard

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.

AGENT: Flood - Other  
EVENT: Glendora Floods, Mud-slides  
DATE: January 24, 1969  
LOCATION: Glendora, California, USA

DESCRIPTION:

Torrential rains, spawned by a Pacific storm, swept across the state of California for nine days, severely damaging parts of the state. The combined agents of flood and mud-slides killed 91 persons, left 9,000 homeless, and caused \$35 million in property damages. In Glendora, property damages were estimated at \$837,905; 201 homes were destroyed or severely damaged. Parts of the state of California were officially declared disaster areas and received \$113.4 million in federal funding.

REPORTS AND PUBLICATIONS:

Parr, Arnold Richard

1969 A Brief View on the Adequacy and Inadequacy of Disaster Plans And Preparations in Ten Community Crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold Richard

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

1969 Flood and Slides in Southern California. Research Memo #34. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Brouillette, John R.

1970 Community Organizations Under Stress: A Study of Interorganizational Communication Networks During Natural Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 210 pp.

Parr, Arnold Richard

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.



AGENT: Flood - River

EVENT: Threat of Flood in Manitoba

DATE: April 5, 1969

LOCATION: Winnipeg, Manitoba, Canada

DESCRIPTION:

Manitoba communities along the Red River were threatened by flood, however, the river did not overflow.

REPORTS AND PUBLICATIONS:

Parr, Arnold

1969 Observations Concerning the Southern Manitoba Spring Flood Preparations, 1969. Research Report #23. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.

AGENT: Flood - River  
EVENT: Threat of St. Paul Flood  
DATE: April 10, 1969  
LOCATION: St. Paul, Minnesota, USA

DESCRIPTION:

In St. Paul, it was predicted that the crests of the Mississippi and Minnesota Rivers would meet; consequently, flooding was expected to occur. Precautionary measures were taken, such as sandbagging, flood wall extensions and evacuation of some towns. However, no flooding occurred. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

- Brouillette, John R. and E. L. Quarantelli  
1969 Types of patterned variation in bureaucratic adaptation to organizational stress. Working Paper #18. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.
- 1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio: The Disaster Research Center, The Ohio State University.
- Brouillette, John R. and E. L. Quarantelli  
1971 Types of patterned variation in bureaucratic adaptation to organizational stress. Sociological Inquiry 41: 39-46.

AGENT: Flood - River  
EVENT: Iowa Flood  
DATE: April 11, 1969  
LOCATION: Sioux City, Iowa, USA

DESCRIPTION:

No casualties and minimal property damage occurred when the Big Sioux River crested at 11.7 feet above flood stage. During the emergency period, 41 families were forced to evacuate; however, the dikes held and little flooding occurred. Sioux City was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University.

Brouillette, John R.

1970 Community Organizations Under Stress: A Study of Interorganizational Communication Networks During Natural Disasters. Ph.D. dissertation (sociology) The Ohio State University. 210 pp.

AGENT: Flood - River  
EVENT: South Dakota Flood  
DATE: April 12, 1969  
LOCATION: Sioux Falls, South Dakota, USA

DESCRIPTION:

No casualties and minimal property damage occurred when the Big Sioux River crested at 19.73 feet above flood stage. During the emergency period, 50 families were forced to evacuate; however, the dikes held, and little flooding occurred. Sioux Falls was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

Parr, Arnold R.

1969 A brief view on the adequacy and inadequacy of disaster plans and preparations in ten community crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold R.

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Brouillette, John R.

1970 Community Organizations Under Stress: A Study of Interorganizational Communication Networks During Natural Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 210 pp.

Parr, Arnold R.

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.

AGENT: Flood - River

EVENT: Minot Flood

DATE: April 14, 1969

LOCATION: Minot, North Dakota, USA

DESCRIPTION:

More than \$3 million in property damages resulted from flooding which lasted over a six week period, leaving 2,000 homeless and damaging 200 homes. Minot was officially declared a disaster area and received \$3.8 million in federal funding.

REPORTS AND PUBLICATIONS:

Parr, Arnold R.

1969 A brief view on the adequacy and inadequacy of disaster plans and preparations in ten community crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold R.

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Brouillette, John R.

1970 Community Organizations Under Stress: A Study of Interorganizational Communication Networks During Natural Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 210 pp.

Parr, Arnold R.

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.

AGENT: Flood - River

EVENT: Spring Floods

DATE: April 20, 1969

LOCATION: Fargo, North Dakota, USA

DESCRIPTION:

Due to extensive preparations undertaken in anticipation of flooding, there were no casualties in Fargo as a result of the massive spring floods. The state of North Dakota experienced extensive property damage, was officially declared a disaster and received federal funding of \$3.785 million.

REPORTS AND PUBLICATIONS:

1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University.

AGENT: Flood - River

EVENT: Spring Floods

DATE: April 22, 1969

LOCATION: Grand Forks, North Dakota, USA

DESCRIPTION:

Due to extensive preparations undertaken in anticipation of massive flooding, Grand Forks suffered no casualties. The state of North Dakota experienced extensive property damage and was officially declared a disaster area, receiving \$3.8 million in federal funding.

REPORTS AND PUBLICATIONS:

1969 The 1969 Spring Floods. Research Memo #35. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University.

AGENT: Flood - Other  
EVENT: July 5 Flooding  
DATE: July 5, 1969  
LOCATION: Ashland, Ohio, USA

DESCRIPTION:

No casualties occurred in Ashland; however, property damage amounted to \$1.9 million. Official declaration of disaster for the state of Ohio resulted in an allotment of \$6 million in federal funding. Many northern Ohio communities were damaged by the floods resulting from area storms.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969



AGENT: Flood - Other  
EVENT: July 5 Flooding  
DATE: July 5, 1969  
LOCATION: Norwalk, Ohio, USA

DESCRIPTION:

No casualties occurred in Norwalk; however, property damage amounted to \$857,000. With official declaration of disaster, \$6 million in federal funding was allotted to the state of Ohio. Many northern Ohio communities were damaged by the floods resulting from area storms.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Flood - Other  
EVENT: July 5 Flooding  
DATE: July 5, 1969  
LOCATION: Wooster, Ohio, USA

DESCRIPTION:

As a result of storms, there were floods in many Northern Ohio communities. In Wooster, 11 people were killed and a few were injured. Official declaration of disaster throughout parts of the state of Ohio resulted in federal funding of \$6.1 million.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Flood - River  
EVENT: Virginia Flood  
DATE: August 22, 1969  
LOCATION: Richmond, Virginia, USA

DESCRIPTION:

Flooding affected 27 cities in Virginia, killing 150 persons and injuring 102 persons. The flooding was due to rain-storms which centered in relatively underpopulated areas; however, property damage was severe and was estimated at \$12.6 million for the state. Major population centers, such as Richmond, had sufficient warning, reducing the loss of life. Parts of the state of Virginia were officially declared disaster areas and received \$10.15 million in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Flood - River  
EVENT: Southeast Pennsylvania Floods  
DATE: September 16, 1971  
LOCATION: Chester, Pennsylvania, USA

DESCRIPTION:

Twelve persons died and 450 were left homeless when Chester Creek overflowed as a result of flooding in Southeast Pennsylvania. Property damage amounted to \$17 million, and with official declaration of disaster, the state received \$500,000 in federal funding.

REPORTS AND PUBLICATIONS:

Forrest, Thomas Robert

1972 Structural Differentiation in Emergent Groups. Ph.D. dissertation (Sociology) The Ohio State University. 197 pp.

Forrest, Thomas Robert

1974 Structural Differentiation in Emergent Groups. Report Series #15. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 111 pp.

AGENT: Flood - Dam

EVENT: Buffalo Creek Flood

DATE: February 26, 1972

LOCATION: Buffalo Creek, West Virginia, USA

DESCRIPTION:

The Buffalo Mining Company, Dam Three, collapsed as a result of heavy rains and flooded an 18 mile strip of the Buffalo Creek Valley. Fourteen mining communities were flooded, 124 people were killed, and 1,100 were injured. Property damage was estimated at \$50 million: 546 homes were destroyed and another 538 were damaged. Of 5,000 area residents, 4,000 were left homeless. Parts of the state of West Virginia were officially declared disaster areas and received \$6 million in federal funding.

REPORTS AND PUBLICATIONS:

Kearney, Michael

1972 Uncoordinated collective response to the Buffalo Creek Hollow dam break disaster of February 26, 1972. Working Paper #45. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

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Michael, Vaughn

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1976 The human meaning of total disaster; the Buffalo Creek experience. Psychiatry 39: 1-18.
- Newman, C. Janet  
1976 Children of disaster: clinical observations at Buffalo Creek. American Journal of Psychiatry 133: 306-312.
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1976 Discussion of the Buffalo Creek disaster: the course of psychic trauma. American Journal of Psychiatry 133: 313-316.
- Titchener, James L. and Frederic T. Kapp  
1976 Family and character change at Buffalo Creek. American Journal of Psychiatry 133: 295-299.
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1978 Quantifying interview data on psychic impairment of disaster survivors. Journal of Nervous and Mental Disease 166: 209-216.
- Gleser, Goldine C., Bonnie Green, and Carolyn Winget  
1981 Prolonged Psychosocial Effects of Disaster: A Study of Buffalo Creek. New York: Academic Press. 176 pp.

AGENT: Flood - Other  
EVENT: New Braunfels Flooding  
DATE: May 11, 1972  
LOCATION: New Braunfels, Texas, USA

DESCRIPTION:

The New Braunfels tornado resulted in flooding, causing the deaths of 15 persons and injuring 150 others. Property damage was estimated at about \$1.5 million. New Braunfels was officially declared a disaster area, and the state of Texas received \$2.3 million in federal funding.

REPORTS AND PUBLICATIONS:

Waxman, Jerry

1973 An Analysis of Commercial Broadcasting Organizations During Flood Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 225 pp.

Waxman, Jerry

1973 Local broadcast gatekeeping during natural disasters. Journalism Quarterly 50: 751-758.

AGENT: Flood - Dam  
EVENT: Rapid City Flood  
DATE: June 9, 1972  
LOCATION: Rapid City, South Dakota, USA

DESCRIPTION:

Heavy rains in the Black Hills initially caused flooding in Rapid City; however, a second wave of destruction came when Canyon Lake Dam collapsed under the pressure of one foot of rain, sprawling water into Rapid Creek. Damage was extensive along a 30 mile long, half a mile wide area. 237 persons were killed and 5,000 persons were left homeless. Property damage was estimated at \$100 million. Parts of the state of South Dakota were officially declared disaster areas and received \$23 million in federal funding.

REPORTS AND PUBLICATIONS:

- Mileti, Dennis Stephen and E. M. Beck  
1972 Human response to natural hazard warnings: the case of Rapid City. Unpublished paper.
- Mileti, Dennis Stephen  
1973 Drowning: a communicable disease. Mass vs. person-specific short term warning effectiveness during the June 9, 1972 Rapid City flood. Paper presented at the 1973 meeting of the American Sociological Association.
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1973 An Analysis of Commercial Broadcasting Organizations During Flood Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 225 pp.
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1973 Local broadcast gatekeeping during natural disasters. Journalism Quarterly 50: 751-758.
- Hershiser, Marvin  
1974 Some Observations on the Handling of the Dead in the Rapid City, South Dakota Flood Disaster. Preliminary Paper #12. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 7 pp.
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1974 A Normative Causal Model Analysis of Disaster Warning Response. Ph.D. dissertation (Sociology) University of Colorado. 187 pp.



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 1975 Research on reconstruction following disaster. Working Paper #1. Boulder, Colorado: Institute of Behavioral Science, University of Colorado. 75 pp.
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 1976 Family recovery from natural disaster: a preliminary model. Mass Emergencies 1: 267-277.
- Hutton, Janice R.  
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- Hershiser, Marvin, R. and E. L. Quarantelli  
 1976 The handling of the dead in a disaster. Omega 7: 195-207.
- Trainer, Patricia and Robert Bolin  
 1976 Persistent effects of disaster on daily activities: a cross-cultural comparison. Mass Emergencies 1: 279-290.
- Haas, J. Eugene, Robert W. Kates, and Martyn J. Bowden  
 1977 Reconstruction Following Disaster. Cambridge, Massachusetts: Massachusetts Institute of Technology Press. 331 pp.
- Bolin, Robert and Patricia Trainer  
 1978 Modes of family recovery following disaster: a cross-national study. Pp. 233-247 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage.

AGENT: Flood - River  
EVENT: Richmond Flood  
DATE: June 22, 1972  
LOCATION: Richmond, Virginia, USA

DESCRIPTION:

In Virginia, floods affected 2/3 of the state, causing \$160 million in property damage and 17 deaths. The James River overflowed, inundating 1/6 of the city of Richmond and triggering an evacuation of 200 blocks of the commercial-business district of the downtown area, however, no casualties resulted in the city. Flooding of the city's water-works caused an urgent problem due to lack of drinking water. Parts of the state of Virginia were officially declared disaster areas and received \$20.2 million in federal funding.

REPORTS AND PUBLICATIONS:

Bardo, John W.

1977 Organizational Response to Disaster. Preliminary Paper #43. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 32 pp.

Bardo, John W.

1978 Organizational response to disaster: a typology of adaptation and change. Mass Emergencies 3: 87-104.

AGENT: Flood - River  
EVENT: Floods from Tropical Storm Agnes  
DATE: June 25, 1972  
LOCATION: Lebanon, Pennsylvania, USA

DESCRIPTION:

Heavy rains from Hurricane Agnes resulted in flooding, causing hundreds to evacuate their homes. No casualties resulted; however, 50 homes were destroyed. Parts of Pennsylvania were officially declared disaster areas and received \$356,928,822 in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1972

AGENT: Flood - River  
EVENT: Floods from Tropical Storm Agnes  
DATE: June 26, 1972  
LOCATION: Wilkes-Barre and the Wyoming Valley, Pennsylvania, USA

DESCRIPTION:

The rains of Hurricane Agnes caused flooding across six states (New York, New Jersey, Pennsylvania, West Virginia, Virginia, and Maryland), resulting in nearly \$2 billion in property damages. In Wilkes-Barre, these heavy rains which resulted in flooding throughout the Wyoming Valley killed four persons, left 30,000 homeless, and caused over \$1 billion in property damages. Parts of Pennsylvania were officially declared disaster areas and received \$356 million in federal funding.

REPORTS AND PUBLICATIONS:

Collins, Robert A.

1972 The Investigation of Shelter Management and Control in Natural Disaster. Coral Gables, Florida: American Institute for Research/Performance Environment Studies. 44 pp.

Whalen, Edward M.

1972 Observations on the June 1972 Flood in the Wyoming Valley Area of Pennsylvania. Wilkes-Barre, Pennsylvania: Luzerne-Wyoming County Mental Health Center No. 1. 6 pp.

Feld, Allen

1973 Reflection on the Agnes flood. Social Work 18: 46-51.

McGee, Richard K.

1973 The Role of Crisis Intervention in Disaster Recovery. Gainesville, Florida: Center for Crisis Intervention Research, University of Florida. 40 pp.

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Cohen, Elias S. and S. Walter Poulshock

1973 Analyzing society's response to the impact of a major natural disaster on the elderly: a theoretical framework. Paper presented at the 26th annual meeting of the Gerontological Society, Miami, Florida. 13 pp.

- Birnbaum F., J. Coplon, and Scharff  
1973 Crisis intervention after a natural disaster. Social Casework  
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- Mussari, Anthony J.  
1974 Appointment with Disaster: The Swelling of the Flood. Wilkes-Barre, Pennsylvania: Northeast Publishers. 158 pp.
- Richard, Wayne C.  
1974 Crisis intervention services following natural disaster: the Pennsylvania recovery project. Journal of Community Psychology  
2: 211-219.
- Ross, G. Alexander and Martin Smith  
1974 The Emergence of an Organization and an Organization Set: A Study of an Inter-Faith Disaster Recovery Group. Preliminary Paper #16. Columbus, Ohio: The Disaster Research Center, The Ohio State University.
- Blanshan, Sue A.  
1975 Hospitals in "rough water": The Effects of a Flood Disaster on Organizational Change. Ph.D. dissertation (Sociology) The Ohio State University. 337 pp.
- Heffron, Edward T.  
1975 Project Outreach, Final Report. Nanticoke, Pennsylvania: Hazleton-Nanticoke Mental Health/Mental Retardation Center. 9 pp.
- Knaus, Ronald L.  
1975 Crisis intervention in a disaster area: the Pennsylvania flood in Wilkes-Barre. Journal of the American Osteopathic Association 75: 297-301.
- Okura, K. Patrick  
1975 Mobilizing in response to a major disaster. Community Mental Health Journal 11: 136-144.
- Wolensky, Robert P.  
1975 The Aftermath of the Great Agnes Disaster: An Analysis of Emergent Groups and Local Government Officials in the Wyoming Valley of Pennsylvania. Ph.D. dissertation (Sociology) Pennsylvania State University. 249 pp.
- Dynes, Russell R. and E. L. Quarantelli  
1975 Helping behavior in large scale disasters: a social organizational approach. Preliminary Paper #48. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 18 pp.
- Poulshock, S. Walter and Elias S. Cohen  
1975 The elderly in the aftermath of a disaster. The Gerontologist 15: 357-361.



- Kafrisson, Steven R., Edward P. Haffron, and Jack Zusman  
1975 Mental health problems in environmental disasters. Pp. 159-170  
in H.L.P. Resnik, Harvey L. Ruben, and Diana Daskal Ruben (eds.),  
Emergency Psychiatric Care. Bowie, Maryland: The Charles Press.
- Blanshan, Sue A.  
1976 An open-system perspective on organizational change: the effect  
of environmental change on organizational structure. Paper  
presented at the North Central Sociological Meetings, Louisville,  
Kentucky, 1976.
- Hoye, R. Nicholas  
1976 The Flood and the Community. Endwell, New York: Creative  
Printing Company, Inc. 144 pp.
- Melick, Mary Evans  
1976 Social, Psychological, and Medical Aspects of Stress-Related  
Illness in the Recovery Period of a National Disaster. Ph.D.  
dissertation, State University of New York at Albany. 201 pp.
- Wolensky, Robert P.  
1976 The crisis orientation of municipal officials and its relation  
to group emergence. Paper presented to the ARD Sociological  
Research Symposium, Richmond, Virginia.
- Wright, Joseph E.  
1976 Public Evaluations of Organizational Performance After the  
Wilkes-Barre Flood. Preliminary Paper #25. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 21 pp.
- Cohen, Elias S. and S. Walter Foulshock  
1976 The Impact of a Major Natural Disaster on the Elderly and  
Societal Response to Their Needs, Wyoming Valley, Pennsylvania  
1972. Philadelphia, Pennsylvania: Department of Community  
Medicine, University of Pennsylvania. 385 pp.
- Haffron, Edward  
1977 Interagency relationships and conflict in disaster: the  
Wilkes-Barre experience. Mass Emergencies 2: 111-119.
- Martin, Roy Newman  
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resources within the United Presbyterian Church in the U.S.A.  
after tropical storm Agnes, 1972. Paper presented at the  
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Church in the U.S.A. and Tropical Storm Agnes, 1972. Ph.D.  
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Vinso, Joseph D.

- 1977 Financial Implications of Natural Disasters: Some Preliminary Indications. Philadelphia, Pennsylvania: Department of Decision Sciences, University of Pennsylvania. 47 pp.

Wolensky, Robert P.

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- 1977 How do community officials respond to major catastrophes? Disasters 1: 272-274.

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Dynes, Russell R. and E. L. Quarantelli

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Smith, Robert A., Clarence C. Traum, and Lorna H. Poole

- 1977 The provision of primary care during a period of natural disaster or large scale emergency. Mass Emergencies 2: 19-23.

Blanshan, Sue A.

- 1978 A time model: hospital organizational response to disaster. Pp. 173-198 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage.

Logue, James Nicholas

- 1978 Long-term Effects of a Major Natural Disaster: The Hurricane Agnes Flood in the Wyoming Valley of Pennsylvania, June, 1972. Ph.D. dissertation (Public Health) Columbia University. 273 pp.

Melick, Mary Evans

- 1978 Life change and illness: illness behavior of males in the recovery period of a natural disaster. Journal of Health and Social Behavior 19: 335-342.

Mussari, Anthony J.

- 1978 The Agnes Flood Disaster as an Agent of Community Change in Wilkes-Barre, Pennsylvania, 1972-1976. Ph.D. dissertation (History) The University of Iowa. 350 pp.

- Wolensky, Robert P.  
 1978 Power structure and group emergence. Paper presented at the Ninth World Congress of Sociology, Uppsala, Sweden. 17 pp.
- Wright, Joseph  
 1978 Organizational prestige and task saliency in disaster. Pp. 199-213 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage.
- Wolensky, Robert P.  
 1979 Toward a broader conceptualization of volunteerism in disaster. Journal of Voluntary Action Research 8: 33-43.
- Logue, James, Holger Hansen, and Elmer Struening  
 1979 Emotional and physical distress following Hurricane Agnes in Wyoming Valley of Pennsylvania. Public Health Reports 94: 495-502.
- Louge, James and Holger Hansen  
 1980 A case-control study of hypertensive women in a post-disaster community--Wyoming Valley, Pennsylvania, 28-38.
- Melick, Mary Evans and James Logue  
 1980 Mental health in the post-disaster population of the flood in Wilkes-Barre, Pennsylvania. Research in Community and Mental Health 1.
- Logue, James N., Mary Melick, and Elmer Struening  
 1981 A Study of Health and Mental Health Status Following a Major Natural Disaster in Roberta Simmons (ed.), Research in Community and Mental Health, Volume 2. Greenwich, Connecticut: JAI Press.
- Wolensky, Robert P. and Edward J. Miller  
 1981 The everyday versus the disaster role of local officials: Citizens and official definitions. Urban Affairs Quarterly 16: 483-504.
- Quarantelli, E. L.  
 1982 Sheltering and Housing After Major Community Disasters: Case Studies and General Observations. Final Report. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 100 pp.



AGENT: Flood - River  
EVENT: Floods from Tropical Storm Agnes  
DATE: June 27, 1972  
LOCATION: Harrisburg, Pennsylvania, USA

DESCRIPTION:

The rains of Hurricane Agnes caused flooding across six states (New York, New Jersey, Pennsylvania, West Virginia, Virginia, and Maryland) resulting in nearly \$2 billion in property damages. Flooding throughout the Wyoming Valley killed two persons in Harrisburg and caused \$2.5 billion in property damages. Parts of Pennsylvania were officially declared disaster areas and received \$3.56 million in federal funding.

REPORTS AND PUBLICATIONS:

Waxman, Jerry

1978

An Analysis of Commercial Broadcasting Organizations During Flood Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 225 pp.

Waxman, Jerry

1973

Local broadcast gatekeeping during natural disasters. Journalism Quarterly 50: 751-758.

**AGENT:** Flood - River  
**EVENT:** Floods from Tropical Storm Agnes  
**DATE:** June 28, 1972  
**LOCATION:** Corning, New York, USA

**DESCRIPTION:**

The rains of Hurricane Agnes caused flooding across six states (New York, New Jersey, Pennsylvania, West Virginia, Virginia, and Maryland) resulting in nearly \$2 billion in property damages. In Corning 25 people were killed and 100,000 evacuated from their homes as a result of floods which caused \$165 million in property damages. Parts of New York were officially declared disaster areas and received \$98 million in federal funding.

**REPORTS AND PUBLICATIONS:**

**Corning Area Survey Center**

1972 Victim and Non-Victim Survey, Four Surveys. Corning, New York: Corning Area Survey Center. 97 pp.

**Wexman, Jerry**

1973 An Analysis of Commercial Broadcasting Organizations During Flood Disasters. Ph.D. dissertation (Sociology) The Ohio State University. 225 pp.

**Wexman, Jerry**

1973 Local broadcast gatekeeping during natural disasters. Journalism Quarterly 50: 751-758.

**Coward, E. Walter, Jr. and Donald E. Lifton**

1975 Farms, Floods, and Federal Assistance: Agricultural Agencies and Diverse Client Groups. Ithaca, New York: Department of Rural Sociology Cornell University. 40 pp.

**Kliman, Ann S.**

1976 The Corning flood project: Psychological first aid following a natural disaster. Pp. 325-335 in Howard J. Parad et al (eds.), Emergency and Disaster Management: A Mental Health Source. Bowie, Maryland: The Charles Press.

AGENT: Flood - River  
EVENT: Mississippi River Flood  
DATE: April 29, 1973  
LOCATION: St. Louis, Missouri, USA

DESCRIPTION:

The Mississippi River rose above flood stage for over 70 days, causing the evacuation of 38,920 people in a seven state area including Missouri. Ten casualties resulted from the flood, however, \$420 million in property damages was estimated in the seven state area. Parts of Missouri were officially declared disaster areas and received \$17.8 million in federal funding.

REPORTS AND PUBLICATIONS:

Hershiser, Marvin and Daniel Bobb

1973 The St. Louis flood: some observations on warning and pre-impact disaster response. Working Paper #52. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 7 pp.

AGENT: Flood - River  
EVENT: Missouri Flood  
DATE: April 30, 1973  
LOCATION: Missouri, USA

DESCRIPTION:

Of Missouri's 114 counties, 90 were affected by damaging flood waters. Property damage was estimated at \$11.5 million for the state. Eight deaths were attributed to the floods and over 3,000 families were left homeless. Parts of the state of Missouri were declared disaster areas and received \$17.8 million in federal funding.

REPORTS AND PUBLICATIONS:

- Penick, E. C., S. W. Larcen, and B. J. Powell  
1973 Governor's task force for mental health delivery system in times of disaster. Final report. St. Louis, Missouri: Department of Psychological Services, Malcolm Bliss Mental Health Center. 68 pp.
- Penick, E. C., S. W. Larcen and B. J. Powell  
1974 Task force on mental health delivery systems in times of disaster. Final report to the Lt. Governor's Office. St. Louis, Missouri: Department of Psychological Services, Malcolm Bliss Mental Health Center. 16 pp.
- Brownstone, Jane, Elizabeth C. Penick, Stephen W. Larcen, Barbara J. Powell, and Ann F. Nord  
1977 Disaster-relief training and mental health. Hospital and Community Psychiatry 28: 30-32.

AGENT: Flood - River  
EVENT: Southwestern Ontario Floods  
DATE: May 1, 1973  
LOCATION: Fredericton, Ontario, Canada

DESCRIPTION:

The Saint John River overflow caused the evacuation of 500 persons from their homes and resulted in the death of one person. Property damages were assessed at about \$10.3 million.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney  
1973 The 1973 St. John River flood response. EMO National Digest  
13: 9-15.

Kueneman, Rodney  
1973 Southwestern Ontario floods, 1973: preliminary observations.  
EMO National Digest 13: 1-3.

AGENT: Flood - River

EVENT: Idaho Flood

DATE: January 1974

LOCATION: Silver Valley, Northern Idaho, USA

DESCRIPTION:

Overflow of the Coeur d'Alene River caused the evacuation of nearly 800 families in Silver Valley. Few injuries resulted, and damages were minimal. Silver Valley was not officially declared a disaster area.

REPORTS AND PUBLICATIONS:

Harvey, Carol D.

1974 Disaster in hard-rock mining: impact on a stricken community.  
Paper presented at the annual meeting of the Pacific Sociological Association, 1974.

Harvey, Carol D.

1975 Initial responses to disaster: reaction to fire and flood.  
Paper presented at the annual meeting of the Pacific Sociological Association, Victoria, British Columbia, Canada.

AGENT: Flood - River  
EVENT: Brisbane Floods  
DATE: January 29, 1974  
LOCATION: Brisbane, Queensland, Australia

DESCRIPTION:

The Brisbane River reached its peak on January 29, flooding the city of Brisbane. The extensive rainfall was a result of Cyclone Wanda. The flood killed 12 people in the Brisbane region and partially or wholly inundated 6,700 homes.

REPORTS AND PUBLICATIONS:

Shart, Patricia

1976 Victims and Helpers, 1974 Floods in the Mareton Region: A Working Paper. The University of Queensland. Department of Anthropology and Sociology, University of Queensland. 19 pp.

Abrahams, M. J., J. Price, F. A. Whitlock, and G. Williams

1976 The Brisbane floods, January 1974: their impact on health. Medical Journal of Australia 2: 936-939.

Leivesley, Sally

1980 The social consequences of Australian disasters. Disasters 4: 30-37.

AGENT: Flood - River

EVENT: Threat of Missouri Flood

DATE: February 27, 1974

LOCATION: Missouri, USA

DESCRIPTION:

Missouri communities along the Mississippi River were threatened by flood; however, the river did not overflow.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1974



AGENT: Flood - River

EVENT: Threat of Mississippi River Flood

DATE: February 25, 1974

LOCATION: Arkansas, USA

DESCRIPTION:

Arkansas communities along the Mississippi River were threatened by flood which did not occur.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1974

AGENT: Flood - River  
EVENT: Mississippi River Flood  
DATE: March 1, 1974  
LOCATION: Vicksburg, Mississippi, USA

DESCRIPTION:

Mississippi communities along the Mississippi River were threatened by flood; however, the river did not overflow.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1974

AGENT: Flood - River  
EVENT: Manitoba Flood  
DATE: April 21, 1974  
LOCATION: Winnipeg, Manitoba, Canada

DESCRIPTION:

In Winnipeg, preparatory measures were taken to evacuate several hundred persons when the rivers of the Red River Valley Basin approached cresting levels. There were no casualties, however, highways were blocked or washing away and hundreds of homes were flooded.

REPORTS AND PUBLICATIONS:

Hannigan, John A. and Rodney M. Kueneman  
1974 The 1974 Southern Manitoba spring flood response. Working Paper #61. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

AGENT: Flood - River

EVENT: Ontario Flood

DATE: May 17, 1974

LOCATION: Cambridge, Kitchener, Brantford, Southwest Ontario, Canada

DESCRIPTION:

Hundreds of people were evacuated from their homes when the Grand River crested and flooded many parts of southwest Ontario. There were no casualties, however, property damage was extensive and was estimated at \$10 million.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney M.

1973 : Southwestern Ontario floods, 1973: preliminary observations.  
EMO National Digest 13: 1-3.

Kueneman, Rodney M. and John A. Hannigan

1974 The 1974 Grand River flood. Working Paper #62. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 19 pp.

AGENT: Flood - River  
EVENT: Queensland Flood  
DATE: February 11, 1976  
LOCATION: Beaudesert, Queensland, Australia

DESCRIPTION:

No casualties resulted from the Queensland flood which occurred in the lower Logan River, however, area residents were evacuated. Between 50 and 100 homes were flooded.

REPORTS AND PUBLICATIONS:

Irish, J. L. and B. Falconer  
1976 Reaction to flood warning. Paper presented at the Symposium on Natural Hazards in Canberra, Australia, May 26-29, 1976. 29 pp.

AGENT: Flood -- River

EVENT: Minot Flood

DATE: April 15, 1976

LOCATION: Minot, North Dakota, USA

DESCRIPTION:

Approximately 12,000 people were evacuated when the Souris River flooded for the fifth time in seven years.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1976

AGENT: Flood - Dam  
EVENT: Teton Dam Flood  
DATE: June 5, 1976  
LOCATION: Southeastern Idaho, USA

DESCRIPTION:

The dam began leaking three and one-half hours before it burst, giving the surrounding communities little warning of the impending event. The break released 80 billion gallons of water along an 80 mile path, killing 11 people, hospitalizing 13 others, and causing \$1 billion in property losses. Approximately 80,000 people were forced to evacuate their homes in four counties. The aftermath left 40,000 people homeless and completely inundated 300 square miles of farm land. Aerial surveys indicated that 450 farms, 700 homes, and 200 businesses were damaged or destroyed. Parts of Idaho were officially declared disaster areas and received \$44 million in federal funding.

REPORTS AND PUBLICATIONS:

- Hall, P. S. and W. Landreth  
1975 Assessing some long-term consequences of a natural disaster. Mass Emergencies 1: 55-62.
- Gurney, Patrick J.  
1977 The therapeutic community revisited. Some suggested modifications and their implications. Preliminary Paper #39. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.
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1978 Coping behavior of elderly flood victims. The Gerontologist 18: 541-546.
- Golec, Judith Anne  
1980 Aftermath of Disaster: The Teton Dam Break. Ph.D. dissertation (Sociology) The Ohio State University. 192 pp.

AGENT: Flood - Flash  
EVENT: Big Thompson Flood  
DATE: July 31, 1976  
LOCATION: Loveland, Colorado, USA

DESCRIPTION:

The 25 mile long Big Thompson Canyon experienced extensive flooding, killing 139 people and injuring 88 others. Rain fell on the canyon for four and a half hours, causing the river to crest 10-18 feet above normal. In the days following the initial rainfall, 25.8 million gallons of water poured into the canyon daily, resulting in the evacuation of 1,900-2,600 people. Parts of Colorado were officially declared disaster areas and received \$8 million in federal funding.

REPORTS AND PUBLICATIONS:

- Blanshan, Sue A.  
1977 Disaster Body Handling. Preliminary Paper #44. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 15 pp.
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1977 Disaster body handling. Mass Emergencies 2: 249-258.
- Gruntfest, Eve C.  
1977 What People Did During the Big Thompson Flood. Natural Hazards Research Working Paper #32. Boulder, Colorado: University of Colorado Institute of Behavioral Science. 64 pp.
- Miller, Judith Ann  
1977 Families in the Aftermath of Disaster: The Big Thompson Flood of 1976. M.S. thesis (Child Development and Family Relationships) Colorado State University. 89 pp.
- Muller, Larry A. and Patrick F. Mulhern  
1977 1976 Big Thompson Flood and Flood Recovery Planning. New York: American Society of Civil Engineers. 27 pp.
- Kimball, Edith Hill  
1978 Recovery of the Older Survivors of the 1976 Big Thompson Flood. M.S. thesis (Child Development and Family Relationships) Colorado State University. 110 pp.
- Gruntfest, Eve C., Heidi and Guy Burgass, Harold C. Cochrone, Lois Steinluck, and Marilyn Stropes  
1979 Flash Flood on the Big Thompson: A Case Study. Paper prepared for the workshop on State Management of Resource Scarcity and Natural Hazards. Western Governors' Policy Office Institute for Policy Research. 34 pp.



McComb, David

1980 Big Thompson: Profile of a Natural Disaster. Boulder,  
Colorado: Pruett Publishing.

Burgass, Heidi, Guy M. Burgass, and Thomas E. Drabek

1980 A Sociological Analysis of Organization Search and Rescue  
Actions Following the 1976 Big Thompson Flash Flood. Denver,  
Colorado: Department of Sociology, The University of Denver.  
19 pp.

AGENT: Flood - River  
EVENT: Winter Thaw Flood Threat  
DATE: Winter-Spring, 1976-1977  
LOCATION: Pittsburgh, Pennsylvania, USA

DESCRIPTION:

The unusually severe winter of 1976-1977 brought anticipation of flooding in the Pittsburgh area where the Allegheny, Monongahela and Ohio Rivers merge. The flooding did not actualize and did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Nehnevajsa, Jiri and Henry Wong

1977 : Flood Preparedness 1977: A Pittsburgh Area Study. Pittsburgh, Pennsylvania: University of Pittsburgh Center for Urban Research. 181 pp.

AGENT: Flood - River

EVENT: Charleston Flood

DATE: January 17, 1977

LOCATION: Charleston, Missouri, USA

DESCRIPTION:

Flooding in Charleston was minimal with loss limited to property and crop damage.

REPORTS AND PUBLICATIONS:

1977 Flood Rural MH Services. Field Report #41. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University.

AGENT: Flood - River  
EVENT: Harlan Flood  
DATE: April 6, 1977  
LOCATION: Harlan County, Kentucky, USA

DESCRIPTION:

Heavy rains caused widespread, severe flooding in several Southeastern Kentucky and Southwestern Virginia communities. In Harlan, Kentucky, five people were killed, 20 were injured, and 2,500 people were evacuated as a result of the floods. Seventy percent of the businesses in Harlan were inundated. Property damages in Eastern Kentucky were estimated at \$100 million. Parts of Kentucky were officially declared disaster areas and received \$28 million in federal funding.

REPORTS AND PUBLICATIONS:

1977 Flood, Rural MH Services. Field Reports #54, 54a, 54b. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - River  
EVENT: Southeastern West Virginia Floods  
DATE: April 7, 1977  
LOCATION: Southeastern West Virginia, USA

DESCRIPTION:

The Southeastern West Virginia floods killed 19 people and left hundreds homeless with property damages estimated in the millions. Few injuries were attributable to the flood due to a slow rise of water. Parts of West Virginia were officially declared disaster areas and received \$12 million in federal funding.

REPORTS AND PUBLICATIONS:

1977 : Floods, Southeastern West Virginia. Field Report #55. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - River  
EVENT: Virginia Floods  
DATE: April 9, 1977  
LOCATION: Southwestern Virginia, USA

DESCRIPTION:

Heavy rains caused widespread, severe flooding in several Southeastern Kentucky and Southwestern Virginia communities. Southwestern portions of Virginia were severely damaged with 1,300 residences and 1,010 businesses destroyed. No deaths resulted from flooding in Southwestern Virginia, however 4,274 families were evacuated as a precautionary measure. Parts of Virginia were officially declared disaster areas and received \$7 million in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1977

AGENT: Flood - Dam  
EVENT: Johnstown Flood  
DATE: July 20, 1977  
LOCATION: Johnstown, Pennsylvania, USA

DESCRIPTION:

The Laurel Run Dam, northwest of Johnstown, received 12 inches of rain and gave way as a result of the pressure, killing 73 people. Fifty thousand people were evacuated as a precautionary measure. Property damages were estimated at \$200 million with 412 homes and 276 businesses destroyed. Parts of Pennsylvania were officially declared disaster areas; estimated federal funding to be received was \$112,596,533.

REPORTS AND PUBLICATIONS:

1977 Flood, Johnstown. Field Reports 59, 59a, 59b, and 59c.  
Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - Flash  
EVENT: Kansas City Flash Floods  
DATE: September 12, 1977  
LOCATION: Kansas City, Missouri, USA

DESCRIPTION:

In Kansas City, sudden onset of flood waters caused 25 deaths and \$62 million in property damages. Approximately 12 inches of rain fell within a two-day period, causing Brush Creek to become a wall of water estimated at times to be 22 feet high. This and other overflowing tributaries resulted in the evacuation of 2,600 people.

REPORTS AND PUBLICATIONS:

1977 Flash Floods, Kansas City, Missouri. Field Report #60.  
Columbus, Ohio: The Disaster Research Center, The Ohio State University.



AGENT: Flood - Dam  
EVENT: Toccoa Dam Break  
DATE: November 6, 1977  
LOCATION: Toccoa, Georgia, USA

DESCRIPTION:

The Kelly Barnes Reservoir dam was at overflow stage after three days of rain. The dam eroded and gave way. Eighty acres of water descended on the college community below, killing 38 people and causing an estimated \$2.5 million in property damages.

REPORTS AND PUBLICATIONS:

1977 : Dam Break, Toccoa, Georgia. Field Reports #63 and 63a.  
Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Flood - River

EVENT: Four River Floods

DATE: 1977-1978

LOCATION: Two unidentified communities in the Midwest, one in the Northwest and one in the West, USA

DESCRIPTION:

Four small communities underwent flooding of at least moderate magnitude. Only one person was killed, but in the most affected locality, 700 households evacuated.

REPORTS AND PUBLICATIONS:

Perry, Ronald, Michael K. Lindell, and Marjorie Greene  
1981 Evacuation Planning in Emergency Management. Lexington,  
Massachusetts: Lexington Books. 199 pp.

AGENT: Flood - River  
EVENT: Grand Forks Flood  
DATE: April 11, 1978  
LOCATION: Grand Forks, North Dakota and East Grand Forks, Minnesota, USA

DESCRIPTION:

Rural areas surrounding the Grand Forks region were impacted heavily when the Red River overflowed its banks. The two cities and bordering rural areas were declared Federal Disasters. The estimated damage toll was \$11 million.

REPORTS AND PUBLICATIONS:

Drabek, Thomas E.

1979 The Flood Breakers: Citizens Band Radio Use During the 1978 Flood in the Grand Forks Region. Boulder, Colorado: Institute of Behavioral Science, University of Colorado. 119 pp.

Drabek, Thomas E., Jessica Eagerton, Paul Munson, and Donald Q. Brodie  
1979 CB Use in a Natural Disaster: Emergent Patterns and Perceptions of Outcome. Denver, Colorado: Department of Sociology, The University of Denver. 15 pp.

Drabek, Thomas E., Jessica Eagerton, Paul Munson, and Donald Q. Brodie  
1979 CB Use in a Natural Disaster: Emergent Patterns and Perceptions of Outcome. Apco Bulletin: 1-5.

Drabek, Thomas E., Donald Q. Brodie, Jessica Eagerton, and Paul Munson  
1979 The Flood Breakers: Citizens Band Radio Use During the 1978 Flood in the Grand Forks Region of North Dakota and Minnesota. Denver, Colorado: Department of Sociology, The University of Denver. 85 pp.

AGENT: Flood - Flash  
EVENT: Flash Flood, Bandera County  
DATE: August 1, 1978  
LOCATION: San Antonio, Texas, USA

DESCRIPTION:

In one twelve-hour period, more than twenty-one inches of rain fell, swelling the Medina River basin in Bandera County. A muddy, 50 foot wall of water rampaged through the countryside, uprooting trees and destroying houses. Fourteen lives were lost, 15 million dollars in property was lost, including 200 houses.

REPORTS AND PUBLICATIONS:

Kilijanik, Thomas S.  
1980 The Emergence of Interorganizational Communication Network Following Natural Disasters. Denver, Colorado: Department of Sociology, The University of Denver. 236 pp.

AGENT: Flood - Other  
EVENT: Terrace Floods  
DATE: October-November 1978  
LOCATION: Terrace, British Columbia, Canada

DESCRIPTION:

Unseasonal warm weather, high winds and excessive rainfall resulted in floods which killed two, isolated a number of communities, and did much economic damage.

REPORTS AND PUBLICATIONS:

Scanlon, Joseph  
1979 The Media and the 1978 Terrace Floods: An Initial Test of an Hypothesis. Paper presented for the Committee on Disasters and the Mass Media. 8 pp.

Scanlon, Joseph  
1980 The Media and the 1978 Terrace Floods: An Initial Test of a Hypothesis. Pp. 254-262 in Committee on Disasters and the Mass Media, Disasters and the Mass Media. Washington, D. C.: National Academy of Sciences.

**AGENT:** Flood - River  
**EVENT:** Pearl River Flood  
**DATE:** April 11-18, 1979  
**LOCATION:** Jackson, Mississippi, USA

**DESCRIPTION:**

The Pearl River crested 25 feet over the 18 feet flood stage level and gave the city its worst flood disaster. Over 2,000 residences were flooded and over 6,500 persons had to be evacuated. Property damage was over \$168 million. There was a federal declaration of disaster.

**REPORTS AND PUBLICATIONS:**

Anderson, Dan R. and Maurice Weinrobe  
1980 Effects of a Natural Disaster on Local Mortgage Markets: The Pearl River Flood in Jackson, Mississippi, April 1979. Working Paper #39. Denver, Colorado: Institute of Behavioral Sciences, The University of Colorado. 48 pp.

D-HURRICANE, TYPHOON, AND SEVERE STORM

AGENT: Typhoon

EVENT: Typhoons in the Pacific

DATE: November 2 and 10, 1947

LOCATION: Yap, Western Caroline Islands

DESCRIPTION:

Two typhoons struck Yap about a week apart. No one was killed and only a few were injured, but housing damage was considerable.

REPORTS AND PUBLICATIONS:

Schneider, David M.

1957 Typhoons on Yap. Human Organization 16: 10-15.



AGENT: Typhoon

EVENT: Typhoon in the Pacific

DATE: December 23, 1947

LOCATION: Yap, Western Caroline Islands

DESCRIPTION:

About 40 days after two typhoons struck Yap, it was struck again but with minimum casualties.

REPORTS AND PUBLICATIONS:

Schneider, David M.

1957 Typhoons on Yap. Human Organization 16: 10-15.

AGENT: Typhoon

EVENT: Typhoon in the Pacific

DATE: January 13, 1948

LOCATION: Yap, Western Caroline Islands

DESCRIPTION:

This was the last of a series of four typhoons which hit Yap in about a two month period.

REPORTS AND PUBLICATIONS:

Schneider, David M.

1957 Typhoons on Yap. Human Organization 16: 10-15.

AGENT: Severe Storm

EVENT: Heavy Rains Resulting in Landslides

DATE: June 13, 1950

LOCATION: Darjeeling, India

DESCRIPTION:

- Landslides were set off by 32 inches of rain over a three day period. About 150 people were killed in the district, 30 in the town itself. Over 100 were injured, and 2,000 were rendered homeless. About 200 houses were damaged.

REPORTS AND PUBLICATIONS:

Sinha, D.

1952 Behavior in a catastrophic situation: A psychology study of reports and rumours. British Journal of Psychology 43: 200-209.

AGENT: Hurricane  
EVENT: Polynesian Hurricane  
DATE: January 26, 1952  
LOCATION: Tikopia, Solomon Islands, Polynesia

DESCRIPTION:

This hurricane resulted in no fatalities, but was very destructive economically. The hurricane destroyed essential coconut and breadfruit crops which led to famine and political unrest on the island.

REPORTS AND PUBLICATIONS:

Spillius, James

1957 Natural disaster and political crisis in a Polynesian society:  
An exploration in operational research. Human Relations 10:  
3-27, 113-124.

Firth, Raymond

1959 Social Change in Tikopia. New York: MacMillan. 360 pp.

AGENT: Typhoon

EVENT: Typhoon in the South Pacific

DATE: February 2, 1953

LOCATION: Tikopia, Solomon Islands, Polynesia

DESCRIPTION:

A typhoon led to various areas being flooded, and 50% of the crops being damaged.

REPORTS AND PUBLICATIONS:

Spillius, James

1957 Natural disaster and political crisis in a Polynesian society:  
An exploration of operational research. Human Relations 10:  
3-27, 113-125.

AGENT: Hurricane  
EVENT: Hurricane Barbara Threat  
DATE: August 14, 1953  
LOCATION: Ocean City, Maryland, USA

DESCRIPTION:

The threatening forces of hurricane Barbara led to the evacuation of Ocean City residents. No casualties occurred as a result of the hurricane.

REPORTS AND PUBLICATIONS:

Rayner, Jeannette F.

1953 Hurricane Barbara: A Study of the Evacuation of Ocean City, Maryland, August 1953. Washington, D. C.: National Academy of Sciences. 17 pp.

AGENT: Hurricane  
EVENT: Hurricane Florence Threat  
DATE: September 25, 1953  
LOCATION: Panama City, Florida, USA

DESCRIPTION:

Hurricane Florence threatened Panama City and resulted in the evacuation of 10,000 people. Damages to the city, however, were minimal.

REPORTS AND PUBLICATIONS:

Killian, Lewis M.  
1954 Evacuation of Panama City Before "Hurricane Florence." Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 14 pp.

AGENT: Hurricane

EVENT: Hurricane Carol

DATE: August 31, 1954

LOCATION: Portsmouth, New Hampshire, USA

DESCRIPTION:

Hurricane Carol lashed the coasts of Middle Atlantic and New England states on August 31 and dissipated its force in Quebec. Winds ranged up to 100 miles per hour. The storm killed 43 people in New England. Parts of the New England states were officially declared disaster areas and received \$6.5 million in federal funding.

REPORTS AND PUBLICATIONS:

Prell, Arthur Ely

1955 Successive hurricanes and cultural defenses in a New England city. Unpublished paper. 15 pp.

Prell, Arthur E. and I. E. Reed

1955 Hurricanes Carol and Edna: Effects of a disaster in a New England town. Paper presented at the annual meeting of the American Sociological Association, Washington, D. C., 1955.



AGENT: Hurricane  
EVENT: Hurricane Edna  
DATE: September 11, 1954  
LOCATION: Portsmouth, New Hampshire, USA

DESCRIPTION:

Hurricane Edna struck Portsmouth only 12 days after the town felt the forces of Hurricane Carol. The eye of the storm passed over the town, striking with full force, however, no casualties resulted.

REPORTS AND PUBLICATIONS:

Prell, Arthur E.

1955 Successive hurricanes and cultural defenses in a New England city. Unpublished paper. 15 pp.

Prell, Arthur E. and I. E. Reed

1955 Hurricanes Carol and Edna: Effects of a disaster in a New England town. Paper presented at the annual meeting of the American Sociological Association, Washington, D. C., 1955.

AGENT: Hurricane  
EVENT: Hurricane Audrey  
DATE: June 27, 1957  
LOCATION: Cameron Parish, Louisiana, USA

DESCRIPTION:

Hurricane Audrey struck the coastal areas of Louisiana and Texas, killing 500-550 people and injuring many. Property damages were estimated at \$15 million for both states. In Cameron, approximately 400 people were killed, 800 homes were destroyed or damaged and 2,500 people were evacuated. Parts of Louisiana were officially declared disaster areas and received \$3 million in federal funding.

REPORTS AND PUBLICATIONS:

Foley, Albert S.

1957 Lower Cameron Parish community: June to September 1957. Unpublished report. Washington, D. C.: Disaster Research Group, National Academy of Sciences. 68 pp.

Friedsam, H. J.

1957 Memorandum on formal organizations in Hurricane Audrey. Unpublished report. Washington, D. C.: Disaster Research Group, National Academy of Sciences. 131 pp.

Moore, Harry E.

1957 Report on Hurricane Audrey. Unpublished report. 10 pp.

Fogleman, C. W.

1958 Family and Community in Disaster: A Social-psychological Study of the Effects of a Major Disaster upon Individuals and Groups Within the Impact Area. Ph.D. dissertation (Sociology) Louisiana State University. 394 pp.

Fogelman, C. W. and N. J. Parenton

1959 Disaster and aftermath: selected aspects of individual and group behavior in critical situations. Social Forces 38: 129-135.

Friedsam, H. J.

1960 Older persons as disaster casualties. Journal of Health and Human Behavior 1: 269-273.

Friedsam, H. J.

1961 Reactions of older persons to disaster-caused losses: an hypothesis of relative deprivation. Gerontologist 1: 34-37.

Knifian, Fred B. and Martin Wright

1963 Disaster and reconstruction in Cameron Parish. Louisiana  
Studies 22: 74-83.

Bates, F. L., C. W. Fogleman, V. J. Parenton, R. H. Pittman, and G. S. Tracy  
1963 The Social and Psychological Consequences of a Natural Disaster:  
A Longitudinal Study of Hurricane Audrey. Washington, D. C.:  
Disaster Research Group, National Academy of Sciences. 68 pp.

AGENT: Typhoon

EVENT: Typhoon Ophelia

DATE: November 30, 1960

LOCATION: Ulithi, Caroline Islands, Micronesia

DESCRIPTION:

Typhoon Ophelia killed two people and injured five others in the Caroline Islands. The storm demolished  $\frac{1}{4}$  of the buildings in Ulithi and severely damaged the island's crops.

REPORTS AND PUBLICATIONS:

Lessa, William A.

1964 The social effects of Typhoon Ophelia (1960) on Ulithi. Micronesica  
1: 1-47.

AGENT: Hurricane  
EVENT: Hurricane Carla  
DATE: September 11, 1961  
LOCATION: Texas and Louisiana, USA

DESCRIPTION:

Hurricane Carla struck Louisiana and Texas, killing 46 people. The hurricane came as no surprise, as the residents had been warned for weeks, and an estimated 350,000 evacuated their homes. Property damages were estimated at \$431 million. Agricultural damages alone amounted to \$60 million. Parts of Texas were officially declared disaster areas and received \$14 million in federal funding.

REPORTS AND PUBLICATIONS.

Huff, Millicent and H. Bailly Carroll

1962 Hurricane Carla at Galveston, 1961. Southwestern Historical Quarterly 65.

Moore, Harry E.

1963 Before the Wind: A Study of the Response to Hurricane Carla. Washington, D. C.: Disaster Research Group, National Academy of Sciences. 164 pp.

Moore, Harry E.

1964 and the Winds Blew. Austin, Texas: Hogg Foundation for Mental Health, The University of Texas. 221 pp.

Dacy, Douglas C. and Howard Kunreuther

1969 The Economics of Natural Disasters: Implications for Federal Policy. New York: The Free Press. 270 pp.

Baker, Earl J.

1979 Predicting response to hurricane warnings: A reanalysis of data from four studies. Mass Emergencies 4: 9-24.

AGENT: Severe Storm  
EVENT: Northwestern Storm  
DATE: October 12, 1962  
LOCATION: Portland, Oregon, USA

DESCRIPTION:

Gale force winds and rains struck the Pacific Coast area, killing 46 people in Portland and injuring many others. Property damages for all of Oregon were estimated at \$170 million. The storm did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Crawshaw, Ralph

1963 Reactions to a disaster. Archives of General Psychiatry 9:  
157-162.

AGENT: Hurricane

EVENT: Hurricane Cindy

DATE: September 16, 1963

LOCATION: Jefferson and Orange Counties, Texas, USA

DESCRIPTION:

Hurricane Cindy struck Texas, resulting in heavy property damage but no casualties. Jefferson and Orange Counties received 15 inches of rainfall with property damages estimated at \$10 million. Approximately 700 people were evacuated and some 4,000 persons were left homeless.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1963

AGENT: Hurricane

EVENT: Hurricane Cleo

DATE: August 27, 1964

LOCATION: Miami, Florida, USA

DESCRIPTION:

Several states were affected by Hurricane Cleo, with Florida suffering the heaviest losses; there were three deaths and 1,018 injuries. Property damage was estimated at over \$100 million. Miami particularly suffered extensive damage, with some 2,000 buildings destroyed or damaged. Cleo was the first hurricane to hit the area since 1950. Florida was the only state granted federal aid and received \$2.3 million.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1964



AGENT: Hurricane  
EVENT: Hurricane Dora  
DATE: September 10, 1964  
LOCATION: Jacksonville, Florida, USA

DESCRIPTION:

Hurricane Dora affected Northeastern Florida and Southern Georgia, destroying or damaging 11,354 homes and buildings and killing five people. In Florida alone, two people were killed and 1,489 were injured by the hurricane. For the first time on record, inland areas, normally subjected to minimal hurricane damages, felt the full force of Hurricane Dora's winds. Property damage for the state was estimated at \$200 million. Parts of Florida and Georgia received \$8.2 million and Georgia received \$2 million in federal funding.

REPORTS AND PUBLICATIONS:

1964 Hurricane Dora. Research Memo #12. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Hurricane  
EVENT: Hurricane Hilda, Subsequent Tornadoes  
DATE: October 3, 1964  
LOCATION: New Orleans, Louisiana, USA

DESCRIPTION:

Several tornadoes spawned by Hurricane Hilda killed 39 people and injured 391 in Louisiana. Coastal areas suffered the heaviest losses, with property damage estimated at \$75 million. The extent of destruction entailed: 137 homes destroyed; 19,331 homes damaged; and 248 small businesses destroyed or damaged. Parts of the state of Louisiana were officially declared disaster areas and received \$2.65 million in federal funding.

REPORTS AND PUBLICATIONS:

1964 Hurricane Hilda. Research Memo #15. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Hurricane  
EVENT: Hurricane Betsy, Subsequent Floods  
DATE: September 10, 1965  
LOCATION: New Orleans, Louisiana, USA

DESCRIPTION:

Hurricane Betsy and subsequent rains and floods killed 67 persons, injured 860, and caused \$1 billion in property damages throughout the Gulf State area (Florida, Alabama, Louisiana, and Mississippi). In New Orleans, 17 persons were killed, 550 injured and property damages were estimated at \$100 million. The storm damaged or destroyed 18,000 homes. Parts of Louisiana were officially declared disaster areas and received \$38.5 million in federal funding. In Miami, seven people were killed and property damage was \$139 million. Parts of Florida were officially declared disaster areas and received \$1 million dollars in federal funding.

REPORTS AND PUBLICATIONS:

Otten, Henry

1965 Betsy and all that--the dependent variable. New Orleans:  
Tulane University, School of Social Work.

Connell, Michael L.

1966 Groups in Disaster. Paper presented at the American Psychiatric Association meeting, Atlantic City, 1966.

Lloyd, Gary A.

1966 Tulane and Betsy. Social Work Education Reporter 14: 26-27, 40-41, 45.

Siporin, Mark

1966 The experience of aiding the victims of Hurricane Betsy. Social Service Review 40: 378-389.

Abney, Glenn F. and Larry B. Hill

1966 Natural disasters as a political variable: the effect of a hurricane on an urban election. The American Political Science Review 60: 974-981.

Warheit, George-Jay

1968 The Impact of Major Emergencies on the Functional Integration of Four American Communities. Ph.D. dissertation (Sociology) The Ohio State University. 270 pp.

- Adams, David  
 1970 Natural Disasters and Organizational Change: A Comparative Analysis of Three Cities. Working Paper #30. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 64 pp.
- Forrest, Thomas R.  
 1970 Hurricane Betsy in New Orleans: A Selective Analysis of Organizational Response. Working Paper #27. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 131 pp.
- McLuckie, Benjamin F.  
 1970 A Study of Functional Response to Stress in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 208 pp.
- McLuckie, Benjamin F.  
 1975 Centralization and natural disaster response: a preliminary hypothesis and interpretations. Mass Emergencies 1: 1-9.
- Quarantelli, E. L.  
 1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.
- Dynes, Russell R. and E. L. Quarantelli  
 1977 Helping Behavior in Large-scale Disasters: A Social Organizational Approach. Preliminary Paper #48. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.
- Forrest, Thomas R.  
 1979 Hurricane Betsy, 1965, A Selective Analysis of Organizational Response in the New Orleans Area. Historical and Comparative Series #5. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 131 pp.

AGENT: Typhoon  
EVENT: Typhoon Ida, Subsequent Floods  
DATE: September 25, 1966  
LOCATION: Ashiwada Village, Yamanashi, Japan

DESCRIPTION:

Landslides and floods, an after effect of Typhoon Ida, killed 222 people and injured 301. Property damage was extensive, with 579 buildings destroyed and 978 buildings damaged.

REPORTS AND PUBLICATIONS:

McLuckie, Benjamin F.

1970 A Study of Functional Response to Stress in Three Societies.  
Ph.D. dissertation (Sociology) The Ohio State University.  
208 pp.

McLuckie, Benjamin F.

1975 Centralization and natural disaster response: a preliminary  
hypothesis and interpretations. Mass Emergencies 1: 1-9.

McLuckie, Benjamin F.

1977 Italy, Japan, and the United States: Effects of Centralization  
on Disaster Response 1964-1969. Historical Series #1.  
Columbus, Ohio: The Disaster Research Center, The Ohio State  
University. 130 pp.

AGENT: Typhoon  
EVENT: Typhoon Billie  
DATE: July 9, 1967  
LOCATION: Hiroshima, Japan

DESCRIPTION:

Typhoon Billie struck Hiroshima killing 159 people and injuring 231. Damage was severe, totally destroying 352 buildings and damaging or destroying 8,282 homes.

REPORTS AND PUBLICATIONS:

McLuckie, Benjamin F.

1970 A Study of Functional Response to Stress in Three Societies.  
Ph.D. dissertation (Sociology) The Ohio State University.  
208 pp.

McLuckie, Benjamin F.

1975 Centralization and natural disaster response: a preliminary hypothesis and interpretations. Mass Emergencies 1: 1-9.

McLuckie, Benjamin F.

1977 Italy, Japan, and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disasters Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.

AGENT: Hurricane  
EVENT: Hurricane Beulah  
DATE: September 21, 1967  
LOCATION: Southern Texas, USA

DESCRIPTION:

In Southern Texas, Hurricane Beulah caused major flooding and spawned 155 tornadoes, killing 15 people and injuring several. Destruction was extensive, affecting 23 counties. Property damage was estimated at \$500 million. Parts of the state of Texas were officially declared disaster areas and received \$10 million in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1967

AGENT: Hurricane  
EVENT: Hurricane Camille  
DATE: August 17, 1969  
LOCATION: New Orleans, Louisiana, USA

DESCRIPTION:

Hurricane Camille killed 216 people in Mississippi and Southeast Louisiana, causing an estimated \$1 billion in property losses. In New Orleans, Camille destroyed 5,238 homes and damaged 11,667 others. Transportation facilities such as highways, bridges, railways, and waterways were severely damaged. Crops and timberland were destroyed and livestock losses were great. Approximately 5,000 cattle drowned. Parts of Louisiana were officially declared disaster areas and the state received \$15 million in federal funding.

REPORTS AND PUBLICATIONS:

Dynes, Russell R.

1969 Informal observations on the response to hurricane Camille. Paper presented at the Career Development Conference, OCD Staff College, Battle Creek, Michigan, September 11, 1969.

Dynes, Russell R.

1970 Organizational response to hurricane Camille, August 1969. Paper presented at the Second Conference on Disaster Relief Preparedness Seminar, League of Red Cross Societies, Port-au-Prince, Haiti, June 25, 1970.

McLuckie, Benjamin F.

1970 A Study of Functional Response to Stress in Three Societies. Ph.D. dissertation (Sociology) The Ohio State University. 208 pp.

Wilkinson, Kenneth P. and Peggy Ross

1970 Citizens' Responses to Warnings of Hurricane Camille. Report #35. University, Mississippi: Social Science Research Center, Mississippi State University. 60 pp.

McLuckie, Benjamin F.

1975 Centralization and natural disaster response: a preliminary hypothesis and interpretations. Mass Emergencies 1: 1-9.

McLuckie, Benjamin F.

1977 Italy, Japan, and the United States: Effects of Centralization on Disaster Response 1964-1969. Historical and Comparative Disaster Series #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 130 pp.



AGENT: Hurricane  
EVENT: Hurricane Celia  
DATE: August 3, 1970  
LOCATION: Corpus Christi, Texas, USA

DESCRIPTION:

Hurricane Celia killed 13 persons and injured many others when it struck Corpus Christi, Texas. Property damages were estimated at \$500 million, with 9,000 homes destroyed and 5,500 damaged. Parts of Texas were officially declared disaster areas and received \$36 million in federal funding.

REPORTS AND PUBLICATIONS:

Schaffer, Ruth C. and Earl Cook

1972 Human Response to Hurricane Celia. Environmental Quality  
Note #8. College Station, Texas: Texas A & M University.  
50 pp.

Laube, Jerri

1973 Psychological reactions of nurses in disaster. Nursing Research  
22: 343-347.

AGENT: Hurricane  
EVENT: Hurricane Fifi  
DATE: September 18, 1974  
LOCATION: Northern Coast of Honduras

DESCRIPTION:

According to the Honduran government, 8,000 persons died as a result of torrential rains; 100,000 were made homeless. Extensive damage to public buildings, roads, crops, and live-stock amounted to \$540 million.

REPORTS AND PUBLICATIONS:

- Brown, E. Leonard and D. Neil Snarr  
1978 Post-disaster housing in Honduras after Hurricane Fifi: an assessment of some objectives. Mass Emergencies 3: 239-250.
- Brown E. Leonard and D. Neil Snarr  
1978 Post-disaster Housing: Occupant Satisfaction, Sula Valley, Honduras. Field report #2. Office of Latin American Program, Church World Program. 35 pp.
- Brown, E. Leonard and D. Neil Snarr  
1979 Permanent post-disaster housing in Honduras: aspects of vulnerability to future disasters. Disasters 3: 287-292.
- Brown, E. Leonard and D. Neil Snarr  
1979 Post-disaster Housing: Attrition and Housing Improvement, Sula Valley, Honduras, C. A. Wilmington, Ohio: Wilmington College. 17 pp.
- Brown, E. Leonard and D. Neil Snarr  
1980 User satisfaction with permanent post-disaster housing: two years after Hurricane Fifi in Honduras. Disasters 4: 83-91.

AGENT: Severe Storm  
EVENT: Sydney Severe Storm  
DATE: October 20, 1974  
LOCATION: Sydney, Nova Scotia, Canada

DESCRIPTION:

The Sydney big storm came with little warning and resulted in a half dozen serious injuries, however, no fatalities occurred. Most injuries were from flying debris due to winds gusting at hurricane force. Communications systems were seriously disrupted by the high winds.

REPORTS AND PUBLICATIONS:

Jefferson, Jim and Joseph Scanlon

1974 The Sydney Big Storm Report. Field Report 74/7. Ottawa, Canada: Emergency Planning Canada. 18 pp.

Scanlon, Joseph

1975 Anatomy of a particular rumor. Unpublished paper. 12 pp.

Scanlon, Joseph and Jim Jefferson

1975 The Sydney Simulation. Field Reports 75/3. Ottawa, Canada: Emergency Planning Canada. 10 pp.

Scanlon, Joseph

1976 Sydney---something to know about. Emergency Planning Digest: 10-13.

Scanlon, Joseph

1977 Post-disaster rumor chains: a case study. Mass Emergencies 2: 121-126.

AGENT: Hurricane  
EVENT: Darwin Cyclone  
DATE: December 25, 1974  
LOCATION: Darwin, Australia

DESCRIPTION:

Cyclone Tracy killed 49 people and injured 1,012 when it struck Darwin on Christmas Eve. Most of Darwin's 23,000 residents were evacuated. Property damage was estimated at \$500 million with 8,000 homes and over half the business district destroyed.

REPORTS AND PUBLICATIONS:

Parker, Gordon

1975 Psychological disturbances in Darwin evacuees following Cyclone Tracy. The Medical Journal of Australia, May 24, 1975: 650-652.

Western, John S. and Gordon Milne

1976 Some social effects of a natural hazard; Darwin residents and Cyclone Tracy. Paper presented at a Symposium on Natural Hazards, Canberra, May 26-29, 1976. 16 pp.

Haas, J. Eugene, Harold Cochrane, and Donald Eddy

1976 The Consequences of Large Scale Evacuation Following Disaster: The Darwin, Australia Cyclone Disaster of December 25, 1974. Natural Hazard Research Working Paper #27. Boulder, Colorado: University of Colorado, Institute of Behavioral Science. 67 pp.

Milne, Gordon

1977 Cyclone Tracy: I Some consequences of the evacuation for adult victims. Australian Psychologist 12: 39-54.

Milne, Gordon

1977 Cyclone Tracy: II The effects on Darwin children. Australian Psychologist 12: 55-62.

Parker, Gordon

1977 Cyclone Tracy and Darwin evacuees: on the restoration of the species. British Journal of Psychiatry 130: 548-555.

Haas, J. Eugene, Harold C. Cochrane, and Donald G. Eddy

1977 Darwin, Australia, Christmas 1974 consequences of a cyclone on a small city. Ekistics 260: 45-51.

Scanlon, Joseph

1978 Day one in Darwin: once again the vital role of communications. Paper presented at the World Congress of Sociology, Uppsala, Sweden, August 1978. 37 pp.

Walters, K. J.

1978

The reconstruction of Darwin after Cyclone Tracy. Disasters 2:  
59-68.

Leivesley, Sally

1980

The social consequences of Australian disasters. Disasters 4:  
30-37.

AGENT: Severe Storm  
EVENT: Australian Hailstorm  
DATE: January 10, 1976  
LOCATION: Toowoomba, Queensland, Australia  
DESCRIPTION:

Half of the city was hit by a violent hailstorm. Two hundred people were injured. Damage to 5,000 houses and other property amounted to \$25 million. A secondary disaster agent in the form of cyclonic rains lasted for six weeks after the initial hailstorm.

REPORTS AND PUBLICATIONS:

Leivesley, Sally

1977 Toowoomba: the role of an Australian disaster unit. Disasters 1: 315-322.

Leivesley, Sally

1977 Toowoomba victims and helpers in an Australian hailstorm disaster. Disasters 1: 205-216.

AGENT: Hurricane  
EVENT: Hurricane Eloise  
DATE: September 23, 1975  
LOCATION: Panama City, Fort Walton Beach, Florida, USA

DESCRIPTION:

Thousands were evacuated when Hurricane Eloise struck the Florida Pan-handle, severely damaging a 55 mile strip between Fort Walton Beach and Panama City. More than 500 businesses were destroyed or damaged with property damage estimated at \$200 million. The maximum sustained wind speed was 125 m.p.h. with storm tides and waves as high as 18 feet. Ninety injuries were reported and four deaths were indirectly attributed to the hurricane. Official declaration of disaster resulted in federal funding of over \$5 million.

REPORTS AND PUBLICATIONS:

- Baker, Earl J.  
1976 A Longitudinal Study of Public Attitudes Toward Hazard Zone Land Use Controls. Technical Paper #76-3. Tallahassee, Florida: The Florida State University. 32 pp.
- Baker, Earl J., John C. Brigham, J. Anthony Paredes, and Donald D. Smith  
1976 The Social Impact of Hurricane Eloise on Panama City, Florida. Technical Paper #1. Tallahassee, Florida: The Florida State University. 65 pp.
- Shaws, E. W.  
1977 National flood insurance and the coastal zone: a case study of Hurricane Eloise. Water Resources Bulletin 13: 974-981.
- Windham, G. O., E. I. Posey, P. J. Ross, and B. G. Spencer  
1977 Reactions to Storm Threat During Hurricane Eloise. Report #51. Starkville, Mississippi: Mississippi State University. 74 pp.
- Baker, Earl J.  
1979 Predicting response to hurricane warnings: a reanalysis of data from four studies. Mass Emergencies 4: 9-24.

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The Disaster Research Center, 1976

AGENT: Severe Storm  
EVENT: Port Alice Landslide from Heavy Rains  
DATE: November 12, 1975  
LOCATION: Port Alice, British Columbia, Canada

DESCRIPTION:

Heavy rains in November resulted in tons of mud and water to accumulate on a mountainside near the town of Port Alice. Several mudslides resulted, however, no casualties were reported.

REPORTS AND PUBLICATIONS:

Scanlon, Joseph, Jim Jefferson, and Debbie Sproat  
1976 The Port Alice slide. Field Report 76/1. Ottawa, Canada:  
Emergency Planning Canada. 63 pp.

Scanlon, Joseph, Jim Jefferson, and Debbie Sproat  
1977 Initial crisis response; Mudslide in Port Alice, Canada.  
Ekistics: 27-31.



AGENT: Hurricane  
EVENT: Hurricane Anita  
DATE: September, 1977  
LOCATION: South Texas coast, USA

DESCRIPTION:

Hurricane Anita threatened but did not hit most of the lower Texas coast before going into Mexico. A hurricane watch led to evacuation in a number of Texas communities.

REPORTS AND PUBLICATIONS:

Davenport, Sally S.

1978 Human Response to Hurricanes in Texas--Two Studies. Boulder, Colorado: Institute of Behavioral Science, University of Colorado. 43 pp.

AGENT: Hurricane  
EVENT: Hurricane David  
DATE: September 4, 1979  
LOCATION: Eastern Florida, USA

DESCRIPTION:

Hurricane David hit the eastern coast of Florida after going through the Caribbean. Thousands were evacuated but there were few casualties, although it had killed hundreds further south.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1979

AGENT: Hurricane

EVENT: Hurricane Allen

DATE: August, 1980

LOCATION: South Texas, USA and Jamaica and St. Lucia

DESCRIPTION:

The hurricane cut through the Caribbean doing extensive damage. It did little damage in the United States, but nearly a half million people may have evacuated.

REPORTS AND PUBLICATIONS:

Oliver, J. and D. H. Trollope

1981 Hurricane Allen: A Post-Impact Survey of a Major Tropical Storm. Disaster Investigation Report #3. Townsville, Australia: Center for Disaster Studies, James Cook University. 63 pp.

## E-POWER SYSTEM MALFUNCTION

AGENT: Power System Malfunction  
EVENT: Atomic Laboratory Explosion  
DATE: July 2, 1956  
LOCATION: Bayside, New York, USA

DESCRIPTION:

An explosion destroyed parts of the metallurgy atomic research center of the Sylvania Electric Products Company in Bayside, (Queens) New York. One person was killed and three were seriously injured. Property damage was estimated at \$125,000.

REPORTS AND PUBLICATIONS:

Eisenbud, Merrill

1956 The public and nuclear risk: lessons learned from a pyrophoricity incident. Nucleonics 14: 34-36.

National Analysts Inc.

1956 Study of Public Reactions to the Explosion at Sylvania Laboratories in Queens, New York. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.

AGENT: Power System Malfunction

EVENT: Atomic Plant Explosion

DATE: November 13, 1963

LOCATION: San Antonio, Texas, USA

DESCRIPTION:

When an explosion occurred in an atomic plant near San Antonio, three injuries and no fatalities were reported. Damage to the town was minimal. However, many windows were shattered. A cloud appearing to have "fallout" potential caused some alarm, but it gradually dissipated and drifted from San Antonio.

REPORTS AND PUBLICATIONS:

Haas, J. Eugene

1964 Organizational response to an explosion at Medina AEC base, San Antonio, Texas, November 13, 1963. Research Note #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.

AGENT: Power System Malfunction  
EVENT: Northeastern Power Blackout  
DATE: November 9, 1965  
LOCATION: New York, New York, USA

DESCRIPTION:

A power failure in Northeastern parts of the U.S. and Southeastern parts of Canada affected 30 million people living in a geographical area of 80 thousand square miles. The time span of the power failure ranged from a few minutes to 13½ hours. The power failure had minimal direct effect in relation to casualties and property damage.

REPORTS AND PUBLICATIONS:

- Nash, George and Patricia Nash  
1965 Attitudes During the Blackout. New York: Columbia University Bureau of Applied Social Research. 18 pp.
- Sweetser, Dorrian Apple  
1966 Public Reactions in the Boston Area to the November Power Failure. Boston, Massachusetts: Boston University School of Nursing. 17 pp.
- Hodge, Robert, Paul Siegel, and Angela Lane  
1966 Public Response to the Northeastern Power Blackout. Chicago, Illinois: National Opinion Research Center, University of Chicago. 116 pp.
- Zucker, R. A., M. Manosevitz, and R. I. Lanyon  
1968 Birth order, anxiety, and affiliation during a crisis. Journal of Personality and Social Psychology 8: 354-359.
- Udry, J. Richard  
1970 The effect of the Great Blackout of 1965 on births in New York City. Demography 7: 325-327.
- James, William H.  
1971 Natality, Pearl Harbor, and the New York City blackout. American Journal of Obstetrics and Gynecology 3: 1123-1124.

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The Disaster Research Center, 1965

AGENT: Power System Malfunction  
EVENT: Three Mile Island Nuclear Plant Accident  
DATE: March 28, 1979  
LOCATION: Middletown, Pennsylvania, USA

DESCRIPTION:

Malfunction in nuclear plant led to a series of complications which created perceived threat of a major catastrophe. While there were no casualties, or property damage outside the plant, great stress occurred and substantial, informal mass evacuation took place.

REPORTS AND PUBLICATIONS:

- Barlett, Glen S.  
1979 Reaction of Adolescents to the Three Mile Island Nuclear Plant Emergency. Hershey, Pennsylvania: Department of Pediatrics and Behavioral Science, Hershey Medical Center.
- Flynn, Cynthia  
1979 Three Mile Island Survey, Preliminary Report of the Findings. A Report to the U.S. Nuclear Regulatory Commission.
- Flynn, C. B.  
1979 Three Mile Island Telephone Survey. Preliminary Report on Procedures and Findings. Tempe, Arizona: Mountain West Research. 77 pp.
- Kraybill, Donald  
1979 Demographic and attitudinal characteristics of T.M.I. evacuees. Paper presented at the 1979 Annual Meeting of the Pennsylvania Sociological Society.
- Kraybill, Donald  
1979 Three Mile Island: Local Residents Speak Out. A Public Opinion Poll. Elizabethtown, Pennsylvania: Social Research Center, Elizabethtown College. 12 pp.
- Smith, Martin  
1979 The Three Mile Island evacuation: Voluntary withdrawal from a nuclear power plant threat. Greenvale, New York: Department of Sociology, Long Island University. 21 pp.
- Flynn, C. B. and J. A. Chalmers  
1979 The Social Economic Effects of the Accident at Three Mile Island. Findings to Date. Tempe, Arizona: Mountain West Research Inc. 99 pp.



- Sandman, Peter M. and Mary Paden  
1979 At Three Mile Island. Columbia Journalism Review: 43-58.
- Brunn, Stanely, James Johnson, Jr., and Donald Zeigler  
1979 Final Report on a Social Survey of Three Mile Island Area Residents. East Lansing, Michigan: Department of Geography, Michigan State University. 217 pp.
- Barnes, Kent et al  
1979 Responses of Impacted Populations to the Three Mile Island Nuclear Reactor Accident: An Initial Assessment. New Brunswick, New Jersey: Graduate Program in Geography, Rutgers University.
- Bechtel, D. R. et al  
1979 The Reaction to the Reactor Accident--A General Population Study. Unpublished manuscript. Department of Religion, Dickinson College.
- Dohrenwend, Bruce et al  
1979 Report of the Task Force on Behavioral Effects. Washington, D. C.: President's Communication on Three Mile Island.
- Morell, Jonathan A. and George Spivack  
1980 Review of Studies on the Psychological and Behavioral Impact of the Three Mile Island Nuclear Accident. Philadelphia, Pennsylvania: Department of Mental Health Sciences, Hahnemann Medical College.
- Bromet, Evelyn et al  
1980 Three Mile Island: Mental Health Findings. Pittsburgh, Pennsylvania: Western Psychiatric Institute.
- Houts, Peter S. et al  
1980 Extent and duration of psychological distress of persons in the vicinity of Three Mile Island. Proceedings of the Pennsylvania Academy of Science 54: 22-28.
- Houts, Peter S. et al  
1980 Health Related Impact of the Three Mile Island Nuclear Incident, Part I. Report submitted to the T.M.I. Advisory Panel on Health Research Studies of the Pennsylvania Department of Health.
- Walsh, Edward J.  
1981 Resource mobilization and citizen protest in communities around Three Mile Island. Social Problems 29: 1-21.
- Bromet, Evelyn and Leslie Dunn  
1981 Mental health of Three Mile Island residents. Paper presented at the 1981 annual meetings of the American Orthopsychiatric Association.



F-SNOWSTORM AND BLIZZARD

AGENT: Snowstorm and Blizzard

EVENT: Blizzards in Colorado

DATE: February and April 1957

LOCATION: Sedalia and Trickston, Colorado, USA

DESCRIPTION:

Several blizzards resulted in people being isolated but no casualties.

REPORTS AND PUBLICATIONS:

Mischel, W.

1957 Isolation Study. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 15 pp.

AGENT: Snowstorm and Blizzard  
EVENT: Northeastern Snowstorm  
DATE: March 19-21, 1958  
LOCATION: Morgantown, Pennsylvania, USA

DESCRIPTION:

In Morgantown, heavy snows caused approximately 800 motorists to be stranded in a turnpike restaurant for about 36 hours. One person died of a heart attack.

REPORTS AND PUBLICATIONS:

Fritz, C. E., Jeannette F. Rayner, and S. L. Guskin  
1958 Behavior in an Emergency Shelter: A Field Study of 800  
Persons Stranded in a Highway Restaurant. Washington, D. C.:  
Disaster Research Group, National Academy of Sciences. 37 pp.

AGENT: Snowstorm and Blizzard

EVENT: Great Snowstorm

DATE: January 26-27, 1967

LOCATION: Chicago, Illinois, USA

DESCRIPTION:

In Chicago, 23 inches of snow fell in a 29 hour period, disrupting the daily routine of millions. There were no injuries or fatalities directly related to the snowstorm. The blizzard did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Brouillette, John and James Ross

1967 Organizational Response to the Great Chicago Snowstorm of 1967. Research Note #14. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 31 pp.

Brouillette, John and James Ross

1967 Organizational Response to the Great Chicago Snowstorm of 1967. Research Report #21. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 17 pp.

AGENT: Snowstorm and Blizzard

EVENT: Kennedy Airport Snow-In

DATE: February 10, 1969

LOCATION: Kennedy International Airport, New York, USA

DESCRIPTION:

In New York, a snowstorm stranded 6,000 people in the Kennedy International Airport for several days.

REPORTS AND PUBLICATIONS:

Hammerschlag, Carl A. and Boris M. Astrachan

1971 The Kennedy Airport snow-in: an inquiry into intergroup phenomena.  
Psychiatry 34: 301-308.

AGENT: Snowstorm and Blizzard  
EVENT: Blizzard in Southeastern Canada  
DATE: January 26-27, 1971  
LOCATION: London, Ontario, Canada

DESCRIPTION:

The Southeastern Canadian blizzard involved snow accumulation of 24 inches with drifts up to 12 feet. Wind gusts of 100 miles per hour and temperatures of 15 degrees below zero fahrenheit were recorded. The blizzard caused one death and resulted in few injuries.

REPORTS AND PUBLICATIONS:

Singer, Benjamin D. and Lyndsay Green  
1972 The Social Functions of Radio in a Community Emergency. Toronto,  
Canada: The Copp Clark Publishing Company. 49 pp.

AGENT: Snowstorm and Blizzard  
EVENT: Heavy Snows in South Carolina  
DATE: February 10-12, 1973  
LOCATION: Columbia, South Carolina, USA

DESCRIPTION:

In South Carolina, heavy snow fell for several days, stranding motorists and isolating small villages around the state. In Columbia, over 16 inches of snow fell over a two day period, affecting transportation in and around the city. No casualties occurred, and property damage was minimal. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

Ponting, J. Rick and E. L. Quarantelli  
1973 Some Observations on Organizational Response to the Snowstorm in Columbia, South Carolina, February 9, 1973. Working Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 7 pp.



AGENT: Snowstorm and Blizzard

EVENT: Heavy Snows in Iowa

DATE: April 9-11, 1973

LOCATION: Des Moines, Iowa, USA

DESCRIPTION:

Heavy snows in Des Moines halted activity and caused a general paralysis of all transportation for two days. Thirteen inches of snowfall and 50 mile per hour winds resulted in eight to twenty foot snow drifts, however, there were no fatalities. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

Smith, Martin and John Bardo

1973 Some Observations on Organizational Response to the Snowstorm in Des Moines, Iowa, April 9, 1973. Working Paper #51. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 7 pp.

AGENT: Snowstorm and Blizzard  
EVENT: St. John's Blizzard  
DATE: March 11, 1974  
LOCATION: St. John's, Newfoundland, Canada

DESCRIPTION:

The St. John's blizzard resulted in 20.5 inches of snow and wind gusts of 60-70 miles per hour. However, the original weather forecast called for five to eight inches of snow and strong winds. There were no casualties, but streets and highways were blocked, immobilizing the area.

REPORTS AND PUBLICATIONS:

Scanlon, T. Joseph  
1974 The St. John's/Wyatt Study: An Emergency in Newfoundland. Report #3. Ottawa, Canada: School of Journalism, Carlton University. 14 pp.

Scanlon, Joseph and Brian Taylor  
1974 The St. John's/Wyatt Study. Field Report 74/4. Ottawa, Canada: National Emergency Planning Establishment. 8 pp.

AGENT: Snowstorm and Blizzard  
EVENT: Toowoomba Hailstorm  
DATE: January 10, 1976  
LOCATION: Toowoomba, Queensland, Australia

DESCRIPTION:

A hailstorm hit Toowoomba, Australia without warning, injuring 200 people but killed no one. Thousands of windows were smashed during the 15 minute storm and approximately 5,500 dwellings were damaged. Property damages were estimated at \$25 million.

REPORTS AND PUBLICATIONS:

Leivesley, Sally

1977 Toowoomba: the role of an Australian disaster unit.  
Disasters 1: 315-322.

Leivesley, Sally

1977 Toowoomba: victims and helpers in an Australian hailstorm  
disaster. Disasters 1: 205-216.

AGENT: Snowstorm and Blizzard  
EVENT: Bowling Green Snowstorm  
DATE: December 1976  
LOCATION: Bowling Green, Ohio, USA

DESCRIPTION:

The winter of 1976-1977 was the most severe winter in the Bowling Green, Ohio, area in over 200 years. Common occurrences were: loss of home heating and energy sources, loss of communication, loss of income, individuals living stranded, or combinations of these problems.

REPORTS AND PUBLICATIONS:

Neal, David Miller

1978 The Importance of Family, Friends, and Propinquity in Time of Disaster: A Study of the Response to the Winter of 1976-1977. Unpublished Master's Thesis (Sociology) Bowling Green State University. 74 pp.

Neal, David M., Joseph Perry, and Randolph Hawkins

1982 Getting ready for blizzards: Preparation levels in the Winter of 1977-1978. Sociological Focus, 15: 67-76.

AGENT: Snowstorm and Blizzard  
EVENT: Watertown Snowstorm  
DATE: January 28-February 1, 1977  
LOCATION: Watertown, New York, USA

DESCRIPTION:

No deaths occurred as a result of the New York snowstorm which began on January 28 and lasted until February 1. In Watertown, roads were blocked by 12 foot drifts, a result of 68 inches of snow fall in that area. The town was immobilized and travel was prohibited for one week. Many persons were stranded or isolated for approximately two weeks. Parts of New York were officially declared disaster areas and received \$34 million in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1977

AGENT: Snowstorm and Blizzard  
EVENT: Niagara Blizzard  
DATE: January 28-February 4, 1977  
LOCATION: Niagara Region, Ontario, Canada

DESCRIPTION:

No casualties occurred when a blizzard struck the Niagara region of Ontario, however, many persons were stranded on highways and in their homes. The combination of snow and strong winds blocked roads for eight days. Industrial and agricultural losses resulted.

REPORTS AND PUBLICATIONS:

Scanlon, Joseph and Brian Taylor  
1977 Two Tales of a Snowstorm: How the Blizzard of January 1977 Affected the Niagara Region of Ontario. Ottawa, Canada: Emergency Communications Research Unit, School of Journalism, Carleton University. 45 pp.

AGENT: Snowstorm and Blizzard  
EVENT: Buffalo Blizzard  
DATE: January 28-February 14, 1977  
LOCATION: Buffalo, New York, USA

DESCRIPTION:

The blizzard struck on January 28 and lasted for 17 days, immobilizing the city. Many were stranded in their cars, causing 28 deaths. Buffalo received 153 inches of snow for the winter period; the city normally receives an average of 44 inches. Parts of New York were officially declared disaster areas and received \$34 million in federal funding.

REPORTS AND PUBLICATIONS:

- 1977 Great Snow Fall, Buffalo, New York. Field Report #47.  
Columbus, Ohio: The Disaster Research Center, The Ohio State University.
- Cryns, Arthur G.  
1978 The Buffalo Blizzard of '77: The Human Experience. Survey Research Center, State University of New York at Buffalo. 19 pp.
- Cryns, Arthur G. and Raymond T. Conjeski  
1978 The Buffalo Blizzard of '77: The Human Experience. Buffalo, New York: Survey Research Center, State University of New York at Buffalo. 95 pp.

G-TORNADO

G-1



AGENT: Tornado

EVENT: Tornado in Oklahoma

DATE: April 12, 1945

LOCATION: Antlers, Oklahoma, USA

DESCRIPTION:

A tornado killed 68 and injured 169 in a small town.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis M. Killian, and Wyatt Marrs

1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 78 pp.

AGENT: Tornado  
EVENT: Tornado in Oklahoma  
DATE: April 9, 1947  
LOCATION: Woodward, Oklahoma, USA

DESCRIPTION:

A tornado killed 95 persons and injured nearly 500.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis M. Killian, and Wyatt Marrs  
1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 78 pp.

AGENT: Tornado  
EVENT: Southwestern Tornadoes  
DATE: April 28, 1950  
LOCATION: Holdenville, Oklahoma, USA

DESCRIPTION:

A series of tornadoes killed 12 persons in Oklahoma and West Texas. Holdenville was the hardest hit with 5 persons killed and 28 others injured. The tornado destroyed or damaged 215 homes but did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis M. Killian, and Wyatt Marrs  
1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 78 pp.

AGENT: Tornado  
EVENT: Tornado in Oklahoma  
DATE: September 15, 1950  
LOCATION: Sasakwa, Oklahoma, USA

DESCRIPTION:

Five persons were injured in a tornado.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis M. Killian, and Wyatt Marrs  
1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 78 pp.

AGENT: Tornado

EVENT: Tornado in Oklahoma

DATE: April 5, 1951

LOCATION: Rural Oklahoma, USA

DESCRIPTION:

A tornado hit three rural schools, but only three were injured.

REPORTS AND PUBLICATIONS:

Logan, Leonard, Lewis M. Killian, and Wyatt Marrs

1952 A Study of the Effect of Catastrophe on Social Disorganization.  
Chevy Chase, Maryland: Operations Research Office. 78 pp.

AGENT: Tornado  
EVENT: Tornado in Oklahoma  
DATE: June 8, 1951  
LOCATION: Colony, Oklahoma, USA

DESCRIPTION:

In a tornado, none were killed but two schools and 15 houses were destroyed.

REPORTS AND PUBLICATIONS:

1951 Colony, Oklahoma. Unpublished manuscript. Norman, Oklahoma:  
University of Oklahoma Research Institute.

AGENT: Tornado  
EVENT: Tornado in Oklahoma  
DATE: June 8, 1951  
LOCATION: Corn, Oklahoma, USA

DESCRIPTION:

While none were killed or injured, a tornado damaged or destroyed several dozen houses, a church, and an old peoples' home.

REPORTS AND PUBLICATIONS:

1951 Corn, Oklahoma. Unpublished manuscript. Norman, Oklahoma:  
University of Oklahoma Research Institute.

AGENT: Tornado

EVENT: Tornado in Minnesota

DATE: June 19, 1951

LOCATION: Minneapolis, Minnesota, USA

DESCRIPTION:

Several tornadoes killed one and injured a few people.

REPORTS AND PUBLICATIONS:

1951 Disaster Report: Tornadoes Near Minneapolis, Minnesota,  
June 19, 1951. Chicago, Illinois: National Opinion Research  
Center.



AGENT: Tornado  
EVENT: Arkansas Tornado  
DATE: March 21, 1952  
LOCATION: Northeastern Arkansas, USA

DESCRIPTION:

The Arkansas tornadoes were part of a series which hit six states, killing 239 people, injuring 1,202 others, and destroying or damaging 2,300 homes. White County, Arkansas was severely hit, with 49 people killed, 675 injured, over 400 homes demolished and nearly 600 damaged. Official declaration of disaster resulted in federal funding of \$700,000.

REPORTS AND PUBLICATIONS:

Rayner, J. F.

1952 Disaster Investigation III: Arkansas Tornadoes. College Park, Maryland: Disaster Study Project, University of Maryland.

Fowell, J. W.

1954 An Introduction to the Natural History of Disaster. Baltimore, Maryland: Psychiatric Institute, University of Maryland. 162 pp.

Fritz, C. E. and E. S. Marks

1954 The NORC studies of human behavior in disasters. Journal of Social Issues 10: 26-41.

Marks, E. S., C. E. Fritz et al

1954 Human Reactions in Disaster Situations. Unpublished report. Chicago, Illinois: National Opinion Research Center, The University of Chicago. 525 pp.

Fritz, C. E.

1957 Disaster compared in six American communities. Human Organization 16: 6-9.

Schatzman, L.

1960 A Sequence of Disaster and Its Consequences for Community. Ph.D. dissertation (Sociology) Indiana University. 164 pp.

Dynes, Russell R. and E. L. Quarantelli

1977 Helping Behavior in Large-scale Disasters: A Social Organizational Approach. Preliminary Paper. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 17 pp.

Dynes, Russell R. and E. L. Quarantelli

1980 Helping behavior in large scale disaster. Pp. 339-354 in David Horton Smith and Jacqueline Macauley (eds.), Participation in Social and Political Activities, San Francisco, California: Jossey Bass.

AGENT: Tornado  
EVENT: Warner-Robins Tornado  
DATE: April 30, 1953  
LOCATION: Warner-Robins, Georgia, USA

DESCRIPTION:

The Warner-Robins tornado killed 19 people and injured 450 others. Property damage was estimated at \$20 million, with 365 homes destroyed and \$12 million damage to government property.

REPORTS AND PUBLICATIONS:

- Killian, Lewis M. and Jeannette F. Rayner  
1953 An Assessment of Disaster Operations Following the Warner-Robins Tornado. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 23 pp.
- Killian, Lewis M. and Jeannette F. Rayner  
1953 Military Assistance in the Warner-Robins Tornado Disaster. Pp. 20-25 in Studies of Military Assistance in Civilian Disasters: England and the United States. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences

AGENT: Tornado

EVENT: Waco Tornado

DATE: May 11, 1953

LOCATION: Waco, Texas, USA

DESCRIPTION:

The widely separated Texas tornadoes of May 11, 1953 killed 114 persons and injured 600. Over 1,000 were left homeless when the tornado destroyed 125 homes and damaged 750. The business district of Waco, the town most damaged, had 196 commercial buildings destroyed and another 445 damaged. Total property damage amounted to \$52 million. Texas was officially declared a disaster area and received \$365,000 in federal funding.

REPORTS AND PUBLICATIONS:

Rayner, Jeannette F.

1953 The role of the military in the Waco tornado disaster. Pp. 13-19 in Studies of Military Assistance in Civilian Disasters: England and the U.S. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.

Brannen, Ted R.

1954 Economic Aspects of the Waco, Texas Disaster of May 11, 1953. Research Report #2. Austin, Texas: The University of Texas. 28 pp.

Crawford, Fred R.

1954 Communities in Crisis. Austin, Texas: Department of Sociology, University of Texas. 8 pp.

Crawford, Fred R.

1954 Operation of Public Law 875 in the Waco-San Angelo, Texas Disasters. Austin, Texas: Department of Sociology, University of Texas. 22 pp.

Crawford, Fred R.

1954 Where Did the Victims Eat? Austin, Texas: Department of Sociology, University of Texas. 3 pp.

Moore, Harry E.

1954 Communities in crisis: two come back from disaster. Alcalde 43: 45-49.

Moore, Harry E.

1954 Interim report on Waco-San Angelo disaster study to Harry Williams. Unpublished report. 4 pp.



- Crawford, Fred R. and H. E. Moore  
1954 Waco-San Angelo Disaster Study: First Annual Report.  
Austin, Texas: Department of Sociology, University of Texas.  
242 pp.
- Moore, Harry E. and Fred R. Crawford  
1955 Waco-San Angelo Disaster Study: Report on Second Year's  
Work. Austin, Texas: Department of Sociology, University of  
Texas. 333 pp.
- Williams, Ewell R.  
1956 A Study of Letters to the Editor of the Waco Times-Herald and  
News Tribune Following the Tornado of May, 1953. M. A. thesis  
(Sociology) The University of Texas.
- Crawford, Fred R.  
1957 Patterns of Family Readjustments to Tornado Disasters: A  
Sociological Case Study. Ph.D. dissertation (Sociology) University  
of Texas. 346 pp.
- Crawford, Fred R. and Harry E. Moore  
1957 Relocation of disaster-displaced families. Sociology and  
Social Research 41: 264-269.
- Moore, Harry E.  
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45-50.
- Moore, Harry E.  
1958 Tornadoes over Texas. Austin, Texas: University of Texas  
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- Rayner, Jeannette F.  
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38: 135-139.
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1965 Differential Reaction to Stress: The Social-psychological  
Effects of Disaster. Ph.D. dissertation (Sociology) The University  
of Texas. 176 pp.



Dacy, Douglas C. and Howard Kunreuther  
1969. The Economics of Natural Disasters: Implications for Federal  
Policy. New York: The Free Press. 270 pp.

AGENT: Tornado

EVENT: San Angelo Tornado

DATE: May 11, 1953

LOCATION: San Angelo, Texas, USA

DESCRIPTION:

One of the cities struck by the Texas tornadoes of May 11, 1953 was San Angelo, where 11 people were killed and 150 injured. 320 homes were destroyed and 197 were damaged, leaving 1,200 people homeless. Property damage amounted to over \$3 million. Texas was officially declared a disaster and received \$365,000 in federal funding.

REPORTS AND PUBLICATIONS:

Crawford, F. R.

1954 Operation of Public Law 875 in the Waco-San Angelo, Texas Disasters. Austin, Texas: Department of Sociology, University of Texas. 22 pp.

Crawford, F. R.

1954 Where Did the Victims Eat? Austin, Texas: Department of Sociology, University of Texas. 3 pp.

Moore, H. E.

1954 Interim Report on Waco-San Angelo, Texas Disasters. Austin, Texas: Department of Sociology, University of Texas. 4 pp.

Crawford, F. R. and H. E. Moore

1954 Waco-San Angelo Disaster Study--First Annual Report. Austin, Texas: Department of Sociology, University of Texas. 242 pp.

Moore, H. E. and F. R. Crawford

1955 Waco-San Angelo Disaster Study: Report on Second Year's Work. Austin, Texas: Department of Sociology, University of Texas. 333 pp.

Crawford, F. R.

1957 Patterns of Family Readjustments to Tornado Disasters: A Sociological Case Study. Ph.D. dissertation (Sociology) The University of Texas. 346 pp.

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Moore, H. E. and H. J. Friedsam

1959 Reported emotional stress following a disaster. Social  
Forces 38: 135-139.

AGENT: Tornado  
EVENT: Flint-Beecher Tornadoes  
DATE: June 8, 1953  
LOCATION: Flint-Beecher, Michigan, USA  
DESCRIPTION:

A series of tornadoes struck separated sections of the United States on the 8th and 9th of June, with the Flint-Beecher area the hardest hit. The Flint-Beecher tornadoes killed 116 people and injured 811 others. Property damages were extensive, with 390 buildings destroyed and 276 others damaged. Over 1,500 people were left homeless. Parts of Michigan were officially declared disaster areas and received \$140,900 in federal funding.

REPORTS AND PUBLICATIONS:

- Form, W. H., G. P. Stone, and C. M. Westie  
1953 Preliminary Progress Report of the Flint-Beecher Tornado. East Lansing, Michigan: Social Research Service, Continuing Education Service, Michigan State University. 48 pp.
- Form, W. H., S. Nosow, G. P. Stone, and C. M. Westie  
1954 Final Report on the Flint-Beecher Tornado. Unpublished Report. East Lansing, Michigan: Social Research Service, Michigan State University. 138 pp.
- Rosow, Irving E.  
1955 Conflict of Authority in a Natural Disaster. Ph.D. dissertation (Sociology) Harvard University.
- Nall, Elizabeth W.  
1956 The Influence of Crisis in the Modification of Social Organization. M. A. thesis (Sociology) Michigan State University. 127 pp.
- Form, W. H., S. Nosow, G. P. Stone, and C. M. Westie  
1956 Rescue behavior in the Flint-Beecher tornado. Unpublished report. East Lansing, Michigan: Social Research Service, Michigan State University. 147 pp.
- Form, W. H., C. P. Loomis et al  
1956 The persistence and emergence of social and cultural systems in disaster. American Sociological Review 21.2: 180-185.
- Form, W. H. and S. Nosow  
1958 Community in Disaster. New York: Harper. 273 pp.



White, Meda Miller

1962 Role Conflict in Disasters: Not Family but Familiarity First.  
Final Report. Washington, D. C.: Disaster Study Group, National  
Academy of Sciences. 53 pp.

Rosow, Irving E.

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sertation. Unpublished manuscript. 328 pp.

Rosow, Irving E.

1977 Authority in Emergencies: Four Tornado Communities in 1953.  
Historical and Comparative Disaster Series #2. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 217 pp.



AGENT: Tornado  
EVENT: Worcester Tornado  
DATE: June 9, 1953  
LOCATION: Worcester, Massachusetts, USA

DESCRIPTION:

The Worcester tornado killed 94 people and injured 490 others and caused \$52 million in property damages. Approximately 12,000 people were left homeless, with 1,250 dwellings damaged. Parts of Massachusetts were officially declared disaster areas and received \$500,000 in federal funding.

REPORTS AND PUBLICATIONS:

- Raker, John  
1953 Lessons Gained from the Worcester County Tornado. Washington, D. C.: Walter Reed Army Institute of Research, Walter Reed Medical Center. 13 pp.
- Brodsky, C. M., J. F. Muldoon, and Regina F. Herzfeld  
1954 An Exploratory Study of the Role of the Catholic Church Organizations in Disaster. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 73 pp.
- Rosow, Irving  
1955 Conflict of Authority in a Natural Disaster. Ph.D. dissertation (Sociology) Harvard University.
- Powell, J. W.  
1955 Goal-frustration and role-persistence under disaster stress: a study of the fire fighters in the Worcester-Shrewsbury tornado, June, 1953. Unpublished manuscript. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.
- Bakst, H. J. R. L. Berg, F. D. Forster, and J. W. Raker  
1955 The Worcester County Tornado--A Medical Study of the Disaster. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 93 pp.
- Wallace, Anthony F. C.  
1956 Tornado in Worcester: An Exploratory Study of Individual and Community Behavior in an Extreme Situation. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 166 pp.



White, Meda Miller

1962 Role Conflict in Disasters: Not Family but Familiarity First.  
Final Report. Washington, D. C.: Disaster Study Group, National  
Academy of Sciences. 53 pp.

Rosow, Irving

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Rosow, Irving

1977 Authority in Emergencies: Four Tornado Communities in 1953.  
Historical and Comparative Disaster Series #2. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University. 217 pp.

AGENT: Tornado  
EVENT: Vicksburg Tornado  
DATE: December 5, 1953  
LOCATION: Vicksburg, Mississippi, USA

DESCRIPTION:

Thirty-eight people were killed and 385 others were injured when a tornado hit the business district of Vicksburg, destroying a movie theatre with many children in attendance. Parts of Mississippi were officially declared disaster areas and received \$117,023 in federal funding.

REPORTS AND PUBLICATIONS:

- Bloch, D. A., E. Silber, and Stewart Perry  
1956 Some factors in the emotional reaction of children to disaster.  
American Journal of Psychiatry 113: 416-422.
- Perry, S. E., E. Silber, and D. A. Bloch  
1956 The Child and His Family in Disaster: A Study of the 1953  
Vicksburg Tornado. Washington, D. C.: Committee on Disaster  
Studies, National Academy of Sciences. 62 pp.
- Silber, E., S. E. Perry, and D. A. Bloch  
1958 Patterns of parent-child interaction in a disaster. Psychiatry  
21: 159-167.



AGENT: Tornado  
EVENT: Tornado in Texas  
DATE: June 7, 1954  
LOCATION: San Angelo, Texas

DESCRIPTION:

A tornado injured two people and did 2.4 million dollars worth of damage.

REPORTS AND PUBLICATIONS:

Moore, Harry E. and F. R. Crawford

1955 Operation Repeat in the Waco-San Angelo Disaster Study: Report on the Second Year's Work. Unpublished report. Austin, Texas: Department of Sociology, University of Texas.

Crawford, F. R.

1957 Patterns of Family Readjustments to Tornado Disasters: A Sociological Case Study. Ph.D. dissertation (Sociology) University of Texas.

AGENT: Tornado  
EVENT: Tornado in Northwestern Mississippi  
DATE: February 1, 1955  
LOCATION: Tunica and Desota Counties, Mississippi, USA

DESCRIPTION:

At least 31 persons were killed and 100 injured in tornadoes in Eastern Arkansas, Northwestern Mississippi, and Northern Alabama. The tornadoes struck two rural schoolhouses, killing a number of children who were in class at the time.

REPORTS AND PUBLICATIONS:

Perry, Helen S. and Stuart E. Perry  
1959 The Schoolhouse Disasters: Family and Community as Determinants of the Child's Response to Disaster. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 63 pp.

AGENT: Tornado  
EVENT: Udall Tornado  
DATE: May 25, 1955  
LOCATION: Udall, Kansas, USA

DESCRIPTION:

The Udall tornado killed 79 people and injured 270 others, destroying 135 homes and 22 businesses in its path. Parts of Kansas were officially declared disaster areas and received \$288,991 in federal funding.

REPORTS AND PUBLICATIONS:

Hamilton, R. V., R. M. Taylor, and G. E. Rice  
1955 A Social Psychological Interpretation of the Udall, Kansas  
Tornado. Washington, D. C.: Committee on Disaster Studies,  
National Academy of Sciences. 96 pp.

AGENT: Tornado  
EVENT: Grand Rapids Tornado  
DATE: April 3, 1956  
LOCATION: Grand Rapids, Michigan, USA

DESCRIPTION:

Several states experienced tornadoes and severe storms, with Michigan being hardest hit. Seventeen people were left dead and 262 others were injured. Property damages were estimated at \$15 million. Parts of Michigan were officially declared disaster areas and received \$135,000 in federal funding.

REPORTS AND PUBLICATIONS:

Davis, Robert C.

1956 The tornado disaster in the Grand Rapids area. Unpublished manuscript. Ann Arbor, Michigan: Survey Research Center, University of Michigan. 5 pp.



AGENT: Tornado  
EVENT: Dallas Tornado  
DATE: April 2, 1957  
LOCATION: Dallas, Texas, USA

DESCRIPTION:

The Dallas tornado cut a 21 mile path through the city, killing 10 people and injuring 183 others. Property damages were estimated at \$4 million, with 155 buildings destroyed and 463 damaged.

REPORTS AND PUBLICATIONS:

Friedsam, H. J.

1957 Memorandum on social status as a problem in civil defense organization. Unpublished memorandum. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences.

Fogleman, Morris J.

1958 The Dallas tornado disaster. American Journal of Surgery 95: 501-506.

Moore, H. E. and H. J. Friedsam

1958 Formal and informal social systems in a disaster situation. Paper presented at the annual meeting of the American Sociological Association, Seattle, Washington, 1958. 12 pp.

Moore, H. E. and H. J. Friedsam

1959 Reported emotional distress following a disaster. Social Forces 38: 135-139.

Raker, J. W. and H. J. Friedsam

1963 Disaster-scale medical care problems: a study of medical management of casualties resulting from a tornado in Dallas, Texas. Journal of the American Medical Association 73: 1239-1244.

AGENT: Tornado  
EVENT: Kansas City Tornado  
DATE: May 20, 1957  
LOCATION: Kansas City, Missouri, USA

DESCRIPTION:

The Kansas City tornado was one of a series to touch down in the midwestern states. In Kansas City, 31 people were killed and 200 were injured. The tornado destroyed 350 homes and damaged another 400. Parts of the state of Missouri were officially declared disaster areas and received \$2 million in federal funding.

REPORTS AND PUBLICATIONS:

New, Peter Kong-Ming

1957 A preliminary report of agency functions in a tornado disaster. Unpublished report. Kansas City, Missouri: Community Studies, Inc. 23 pp.

New, Peter Kong, Ming and I. Deutscher

1961 Tornado: a functional analysis of collective behavior in a disaster. Sociological Quarterly 2: 21-36.

AGENT: Tornado  
EVENT: Tornado and Hailstorm  
DATE: April 3, 1961  
LOCATION: South Rampur, East Pakistan

DESCRIPTION:

A tornado and hailstorm resulted in casualties and property damage.

REPORTS AND PUBLICATIONS:

Schuler, E. A. and S. M. Zaidi  
1961 Response to village disaster: tornado and hailstorm at South Rampur. Journal of the East Pakistan Academy for Village Development 3: 1-13.

Zaidi, S. M. and E. A. Schuler  
1961 A study of the reactions of the people in South Rampur to a cyclone. Journal of the East Pakistan Academy for Village Development: 2.

AGENT: Tornado  
EVENT: Portland Tornado  
DATE: October 12, 1962  
LOCATION: Portland, Oregon, USA

DESCRIPTION:

An extratropical cyclone of unprecedented violence struck the Portland area; 46 died. Winds were estimated to be gusting at 116 m.p.h. The total material destruction was estimated at \$170,000,000. The path of the storm was declared a federal disaster area.

REPORTS AND PUBLICATIONS:

Shaw, Ralph Crow

1963 Reactions to a disaster. Archives of General Psychiatry 9:  
157-162.

AGENT: Tornado  
EVENT: Palm Sunday Tornadoes  
DATE: April 11, 1965  
LOCATION: Northern Indiana, USA

DESCRIPTION:

Thirty-seven tornadoes affected a six state area (Arkansas, Michigan, Ohio, Illinois, Indiana, Wisconsin), killing 266 people and injuring 3,261. Property damage for the six states was estimated at over \$200 million. In Northern Indiana, 18 counties were severely damaged by 11 tornadoes destroying 1,250 homes, 221 house trailers, 143 businesses and 1,055 farm buildings. Property damage in Indiana was estimated at \$176 million.

REPORTS AND PUBLICATIONS:

- 1965 Floods and Tornadoes in Northern Midwest. Research Memo #20. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 3 pp.
- 1965 Observations on the Warning Systems in Indiana and Minneapolis Tornadoes. Research Memo #23. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

Brouillette, John R.

- 1966 A Tornado Warning System: Its Functioning on Palm Sunday in Indiana. Research Report #15. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 38 pp.

AGENT: Tornado  
EVENT: Minneapolis Tornado  
DATE: May 6, 1965  
LOCATION: Minneapolis, Minnesota, USA

DESCRIPTION:

The Minneapolis tornado killed 13 people, injured approximately 500 others and left 4,000 homeless. Property damage was estimated at \$50 million. At that time, Minnesota, still under disaster declaration from flooding in April of 1965, was receiving a federal allocation of \$9 million. An additional \$431,000 was allocated to the state.

REPORTS AND PUBLICATIONS:

Adams, David

1965 The Minneapolis Tornadoes May 6, 1965: Notes on the Warning Process. Research Report #16. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 28 pp.

1965 Observations on the Warning Systems in Indiana and Minneapolis Tornadoes. Research Memo #23. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

Boggins, Mary Merritt

1966 Red Cross Public Relations Problems, Policies, and Operations in a Disaster-Stricken Area. M.A. thesis (Journalism)  
The Ohio State University. 227 pp.

AGENT: Tornado  
EVENT: Jackson Tornado  
DATE: March 3, 1966  
LOCATION: Jackson, Mississippi, USA

DESCRIPTION:

The Jackson tornado killed 53 people, injured 500 others, and destroyed a shopping center and factory complex. The tornado, one of a series, touched down in Mississippi and Alabama, killing a total of 58 people. Property damage for the state of Mississippi was estimated at \$12 million. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

Kennedy, Will

- 1966 Some Preliminary Observations on a Hospital Response to the Jackson, Mississippi Tornado of March 3, 1966. Research Report #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 35 pp.
- 1966 Tornado in Jackson, Mississippi, March 1966. Research Memo #26. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 2 pp.

AGENT: Tornado

EVENT: Tampa Tornado

DATE: April 4, 1966

LOCATION: Tampa, Florida, USA

DESCRIPTION:

The Tampa tornado killed 10 people and injured approximately 1,300. The tornado caused \$29 million in property damages, destroying over 300 homes. It did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

1966 Tampa, Florida Tornado. Research Memo #28. Columbus, Ohio:  
The Disaster Research Center, The Ohio State University.



AGENT: Tornado  
EVENT: Topeka Tornado  
DATE: June 8, 1966  
LOCATION: Topeka, Kansas, USA

DESCRIPTION:

The Topeka tornado killed 117 and injured 550 people. The tornado was one of several which touched ground in central Kansas that day. In Topeka, 800 homes were totally destroyed, 800 were severely damaged and over 400 received minor damage. The tornado affected an area eight miles long and four to eight blocks wide. Parts of Kansas were officially declared disaster areas and the state received \$3.7 million in federal funds.

REPORTS AND PUBLICATIONS:

1966 Topeka, Kansas Tornado. Research Memo #29. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

Stallings, Robert

1967 A Description and Analysis of the Warning Systems in the Topeka, Kansas Tornado of June 8, 1966. Research Report #20. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 24 pp.

Tootle, Barbara

1968 Organizational Adaptation to Disaster: A Case Study of the Topeka, Kansas Police Department. M.A. thesis (Sociology) The Ohio State University. 136 pp.

Zurcher, Louis A.

1968 Social-psychological functions of ephemeral roles: a disaster work crew. Human Organization 27: 281-297.

Parr, Arnold Richard

1969 A Brief View on the Adequacy and Inadequacy of Disaster Plans and Preparations in Ten Community Crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold

1969 Group Emergence under Stress: A Study of Collective Behavior during the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Parr, Arnold

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.



- Adams, David, Robert Stallings, and Stephen Vargo  
1970 Natural Disaster and Organizational Change: A Comparative Analysis of Three Cities. Working Paper #30. Columbus, Ohio: The Disaster Research Center, the Ohio State University. 64 pp.
- Zurcher, Louis A., William H. Kay, and James B. Taylor  
1970 Tornado: A Community Responds to Disaster. Seattle, Washington: University of Washington Press. 189 pp.
- Anderson, William A.  
1972 DRC studies of organizational change. Pp. 74-89 in Report on Japan-United States Seminar on Organizational and Community Responses to Disaster. Columbus, Ohio: The Disaster Research Center.
- Drabek, Thomas E. and William H. Key  
1972 Meeting the challenge of disaster: family responses and long-term consequences. Paper presented at the Japan-United States Disaster Research Seminar on Organizational and Community Responses to Disaster, Columbus, Ohio, 1972. 19 pp.
- Drabek, Thomas E., William H. Key, Patricia E. Erickson, and Juanita L. Crowe  
1973 An evaluation of matched samples in quasi-experimental designs. Paper presented at the annual meeting of the Rocky Mountain Social Science Association in Laramie, Wyoming, 1973. 36 pp.
- Drabek, Thomas E., William H. Key, Patricia E. Erickson, and Juanita L. Crowe  
1973 The impact of disaster on kin relationships. Unpublished paper. Denver, Colorado: Department of Sociology, The University of Denver. 53 pp.
- Drabek, Thomas E., William H. Key, Patricia E. Erickson, and Juanita L. Crowe  
1973 Longitudinal impact of disaster on family functioning. Final progress report to the National Institute of Mental Health. Denver, Colorado: Department of Sociology, The University of Denver. 43 pp.
- Drabek, Thomas E., William H. Key, Patricia E. Erickson, and Juanita L. Crowe  
1973 The long-range subjective impact of a disaster. Paper presented to the annual meeting of the Rocky Mountain Social Science Association in Laramie, Wyoming, 1973. 28 pp.
- Erickson, Patricia E., Thomas E. Drabek, William H. Key, and Juanita L. Crowe  
1974 Families in disaster: patterns of recovery. Mass Emergencies 1: 203-216.
- Drabek, Thomas E. and William H. Key  
1975 The impact of disaster on primary group linkages. Mass Emergencies 1: 89-105.



Drabek, Thomas E. and William H. Key

- 1975 The long-term consequences of disaster in families. Paper presented at the Second National Invitational Conference on Natural Hazards in Boulder, Colorado, 1975. 22 pp.

Drabek, Thomas E., William Key, Patricia Erickson, and Juanita Crowe

- 1975 The impact of disaster on kin relationships. Journal of Marriage and the Family: 481-494.

Quarantelli, E. L.

- 1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

Sterling, Joyce, Thomas E. Drabek, and William H. Key

- 1977 The long-term impact of disaster on the health self-perceptions of victims. Paper presented at the annual meeting of the American Sociological Association in Chicago, Illinois, 1977. 41 pp.

Ross, G. Alexander

- 1978 Organizational innovation in disaster settings. Pp. 215-232 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

AGENT: Tornado  
EVENT: Belmond, Iowa Tornado  
DATE: October 14, 1966  
LOCATION: Belmond, Iowa, USA

DESCRIPTION:

The Belmond tornado killed 6 people and injured 150-200 others. Property damage was estimated at \$7.5 million with 76 businesses and 119 homes destroyed and 468 homes damaged. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1966

AGENT: Tornado  
EVENT: Oak Lawn Tornado  
DATE: April 21, 1967  
LOCATION: Oak Lawn, Chicago, Illinois, USA

DESCRIPTION:

In Oak Lawn, 55 people were killed and 964 were injured when a tornado severely damaged the Chicago suburb. Northern Illinois also felt the impact of the tornado with 383 homes destroyed and 371 damaged. Parts of Illinois were officially declared disaster areas and received \$1 million in federal funding.

REPORTS AND PUBLICATIONS:

- 1967 The Oak Lawn, Chicago Tornado. Research Memo #31. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.
- Stallings, Robert A.  
1968 Structural Change in Professional Organizations: A Hospital Response to Disaster. M.A. thesis (Sociology) The Ohio State University. 128 pp.
- Stallings, Robert A.  
1970 Hospital adaptations to disaster: flow models of intensive technologies. Human Organization 29: 294-302.

AGENT: Tornado  
EVENT: Jonesboro Tornado  
DATE: May 15, 1968  
LOCATION: Jonesboro, Arkansas, USA

DESCRIPTION:

The Jonesboro tornado killed 34 people and injured approximately 300 others. Property damage was estimated at \$8 million with 164 homes, several businesses, and one school destroyed. Parts of Arkansas were officially declared disaster areas and received \$250,000 in federal funding.

REPORTS AND PUBLICATIONS:

Brouillette, John

1968 Impressions of the Community Response in the Jonesboro, Arkansas Tornado. Research Report #22. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 14 pp.

Parr, Arnold Richard

1969 A Brief View on the Adequacy and Inadequacy of Disaster Plans and Preparations in Ten Community Crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold Richard

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Parr, Arnold Richard

1970 Organizational response to community crisis and group emergence. American Behavioral Scientist 13: 423-429.

AGENT: Tornado  
EVENT: Kettering Tornado  
DATE: May 8, 1969  
LOCATION: Kettering, Ohio, USA

DESCRIPTION:

The Kettering tornado destroyed 13 homes and severely damaged 163, leaving 300 people homeless. There were no casualties, but 25 people were injured. Property damage was estimated at \$734,600. Official declaration of disaster was not warranted.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Tornado  
EVENT: Salina Tornado  
DATE: June 22, 1969  
LOCATION: Salina, Kansas, USA

DESCRIPTION:

No one was killed, but 83 people were injured and 26 houses and 17 buildings were destroyed. Property damage amounted to \$8 million. Official declaration of disaster resulted in federal funding of \$900,000.

REPORTS AND PUBLICATIONS:

Parr, Arnold

1969 A Brief View on the Adequacy and Inadequacy of Disaster Plans and Preparations in Ten Community Crises. Working Paper #17. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 10 pp.

Parr, Arnold

1969 Group Emergence Under Stress: A Study of Collective Behavior During the Emergency Period of Community Crises. Ph.D. dissertation (Sociology) The Ohio State University. 275 pp.

Parr, Arnold

1970 Organizational response to community crises and group emergence. American Behavioral Scientist 13: 423-429.



**AGENT:** Tornado/Storms  
**EVENT:** July 4 Northern Ohio Tornadoes  
**DATE:** July 4, 1969  
**LOCATION:** Northern Ohio, USA

**DESCRIPTION:**

Tornadoes, storms, and subsequent flooding drove thousands from their homes and killed 39 people. Property damage amounted to \$30 million. Official declaration of disaster resulted in federal funding of \$6 million.

**REPORTS AND PUBLICATIONS:**

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The Disaster Research Center, 1969

AGENT: Tornado  
EVENT: Cincinnati Tornado  
DATE: August 9, 1969  
LOCATION: Cincinnati, Ohio, USA

DESCRIPTION:

The Cincinnati tornado killed four people and injured 264. The tornado left 1,000 homeless with property losses estimated at \$15 million. The tornado did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1969

AGENT: Tornado

EVENT: Texas Tornado

DATE: May 11, 1970

LOCATION: Lubbock, Texas, USA

DESCRIPTION:

On the night of May 11, 1970 tornadoes occurred in Wisconsin, Iowa, Kansas, Ohio, and Texas. The most massive tornado formed over Lubbock, Texas. The Lubbock tornado killed 26 people and injured 2,000. The tornado devastated the community along an 8½-mile path, causing \$135 million in property damage. More than 10,000 buildings were damaged or destroyed by the tornado. Parts of Texas were officially declared disaster areas and the state received \$6 million in federal funding.

REPORTS AND PUBLICATIONS:

Burke, James Carroll

- 1971 Intergovernmental Relations in Disaster Relief: A Case Study of the Lubbock, Texas Tornado of May 11, 1970. M.A. thesis. Texas Tech University. 160 pp.

Dynes, Russell R. and Lynn D. Nelson

- 1971 Religious Reality Construction and Helping Action. Working Paper #41. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 24 pp.

Minnis, Myra S. and A. Perry McWilliams

- 1971 Tornado: The Voice of the People in Disaster and After, a Study in Residential Integration. Lubbock, Texas: Texas Tech University. 188 pp.

Whitehead, Carlton J., Brian K. Lambert, and Joseph E. Minor

- 1971 A City's Response to Disaster. Lubbock, Texas: Department of Business Administration, Texas Tech University. 83 pp.

Minor, Joseph E., Brian K. Lambert, and John Wittman, Jr.

- 1972 Impact of the Lubbock Storm on Regional Systems. Final report. Lubbock, Texas: Texas Tech University. 80 pp.

Nelson, Lynn D.

- 1973 Proximity to emergency and helping behavior: data from the Lubbock tornado disaster. Journal of Voluntary Action Research 2: 194-199.

Dynes, Russell R., and E. L. Quarantelli

- 1975 Helping Behavior in Large Scale Disasters: A Social Organizational Approach. Preliminary Paper #48. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 18 pp.



Nelson, Lynn D. and Russell R. Dynes

- 1976 The impact of devotionalism and attendance on ordinary and emergency helping behaviors. Journal for the Scientific Studies of Religion 15: 47-59.

Quarantelli, E. L.

- 1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 12 pp.

Dynes, Russell R. and E. L. Quarantelli

- 1980 Helping behavior in large-scale disaster. Pp. 339-354 in David Horton Smith and Jacqueline Macaulay (eds.), Participation in Social and Political Activities. San Francisco, California: Jossey-Bass.

AGENT: Tornado  
EVENT: Sudbury Storm  
DATE: August 20, 1970  
LOCATION: Sudbury, Ontario, Canada

DESCRIPTION:

In Sudbury a severe storm, with winds recorded as high as 90 m.p.h., killed four persons and injured approximately 200. The storm was part of a line of thunderstorms moving across a narrow 60-mile path of Northern Ontario. Property damages were estimated at \$5 million, with commercial and residential sections severely damaged.

REPORTS AND PUBLICATIONS:

1970 The Sudbury, Ontario Tornado. Research Memo #36. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 3 pp.



AGENT: Tornado

EVENT: Joplin Tornado

DATE: May 11, 1973

LOCATION: Joplin, Missouri, USA

DESCRIPTION:

In the spring of 1973, Joplin, Missouri was struck by a tornado that killed two people. Eighty-seven were hospitalized as a result of injuries incurred. Approximately 24,000 people suffered property damage.

REPORTS AND PUBLICATIONS:

Penick, E. C., S. W. Larson, and B. J. Powell  
1976 Governor's Task Force for Mental Health Delivery Systems in Times of Disaster. Final report. St. Louis, Missouri: Malcolm Bliss Mental Health Center. 68 pp.

Penick, Elizabeth C., Barbara J. Powell, and William C. Sieck  
1976 Mental health problems and natural disaster: tornado victims. Journal of Community Psychology 4: 64-67.

AGENT: Tornado  
EVENT: Jonesboro Tornado  
DATE: May 27, 1973  
LOCATION: Jonesboro, Arkansas, USA

DESCRIPTION:

The Jonesboro tornado killed 3 persons and injured 253 others. Property damage was estimated at \$41 million, with 1,308 homes destroyed and 1,267 others damaged. Parts of Arkansas were officially declared disaster areas and received \$1.4 million in federal funding.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney, Martin Smith, Verta Taylor, and Jerry Waxman  
1973 Observations on Community Coordination During the May 27,  
1973 Jonesboro, Arkansas Tornado. Working Paper #53. Columbus,  
Ohio: The Disaster Research Center, The Ohio State University.  
10 pp.

AGENT: Tornado  
EVENT: Monticello Tornado  
DATE: April 3, 1974  
LOCATION: Monticello, Indiana, USA

DESCRIPTION:

Two tornadoes touched down in Monticello killing nine persons. Property damages were estimated at \$200 million with 40 businesses and 227 homes destroyed while many others were seriously damaged. Monticello, officially declared a disaster area, was allotted \$11 million in federal funding.

REPORTS AND PUBLICATIONS:

Zarle, Thomas H., Don M. Hartsough, and Donald R. Ottinger

1974 Tornado recovery: the development of a professional-paraprofessional response to a disaster. Journal of Community Psychology 2: 311-320.

Bowman, Sue

1975 Disaster Intervention: from the inside. Paper delivered at 1975 American Psychological Association Annual Meeting, August 31. 12 pp.

Zarle, Thomas H.

1976 Psychological intervention in crises related to natural disasters. Unpublished paper. 21 pp.

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The Disaster Research Center, 1977



AGENT: Tornado  
EVENT: Xenia Tornado  
DATE: April 3, 1974  
LOCATION: Xenia, Ohio, USA

DESCRIPTION:

The Xenia tornado was one in a series of over 100 tornadoes affecting 11 states on the third of April. The path of this tornado was 16 miles long, 1,100 feet wide, with winds estimated at 300 miles per hour. Thirty-five persons were killed and 1,000 others injured. Property damage was estimated at \$75 million with 2,659 homes destroyed and 2,757 homes damaged. Parts of Ohio were officially declared disaster areas and received \$19 million in federal funding.

REPORTS AND PUBLICATIONS:

Laube, Jerri

1974 Response of the Health Care Worker to Family-Community Role Conflict in Disaster and the Psychological Consequences of Resolution. Ph.D. dissertation (Health Sciences) Texas Women's University. 91 pp.

Laube, Jerri M.

1974 Response of the Health Care Worker to Family-Community Role Conflict in Disaster and the Psychological Consequences of Resolution. Ph.D. dissertation (Nursing) Texas Women's University. 91 pp.

Ross, G. Alexander

1974 The Emergence of an Organization and an Organization-set: A Study of an Inter-Faith Disaster Recovery Group. Preliminary Paper #16. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 19 pp.

Taylor, Jack D.

1974 The Xenia Public Schools and Tornado Disaster. Columbus, Ohio: Ohio Department of Education.

Taylor, Jack D.

1975 The Xenia Public Schools and Tornado Destruction: A Study of the Effects of Disaster on Policy Making. Ph.D. dissertation (Education) The Ohio State University.

Quarantelli, E. L. and Russell R. Dynes

1975 The Delivery of Mental Health Services in the Xenia Tornado. Final report. Columbus, Ohio: OSU Research Foundation, The Ohio State University. 282 pp.



- Dynes, Russell R. and E. L. Quarantelli  
 1975 Helping Behavior in Large Scale Disasters: A Social Organizational Approach. Preliminary Paper #48. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 18 pp.
- Burgy, Robert E.  
 1976 Xenia's Residential Development: Initial Planning after the April 3, 1974 Tornado and the Role of Citizen Participation. M.A. thesis (Community Planning) University of Cincinnati.
- Hannigan, John A.  
 1976 Newspaper Conflict and Cooperation Content after Disaster: An Exploratory Analysis. Preliminary Paper #27. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 14 pp.
- Ross, G. Alexander  
 1976 The Emergence and Change of Organization-Sets: An Interorganizational Analysis of Ecumenical Disaster Recovery Organizations. Ph.D. dissertation (Sociology) The Ohio State University.
- Taylor, Verta A.  
 1976 Delivery of Mental Health Services in the Xenia Tornado: A Collective Behavior Analysis of an Emergent System Response. Ph.D. dissertation (Sociology) The Ohio State University. 270 pp.
- Taylor, Verta, G. Alexander Ross, and E. L. Quarantelli  
 1976 Delivery of Mental Health Services in Disasters: The Xenia Tornado and Some Implications. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 328 pp.
- Quarantelli, E. L.  
 1977 Structural Factors in the Minimization of Role Conflict: A Re-examination of the Significance of Multiple Group Membership in Disasters. Preliminary Paper #49. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 14 pp.
- Smith, Martin  
 1977 An Organizational Analysis of Disaster Response: A Study of Religious Organizations. Ph.D. dissertation (Sociology) The Ohio State University. 173 pp.
- Taylor, Verta  
 1977 Good news about disaster. Psychology Today: 93-96.
- Francaviglia, Richard  
 1978 Xenia rebuilds: effects of predisaster conditioning on post disaster redevelopment. Journal of the American Institute of Planners 44: 13-24.



Smith, Martin H.

- 1978 American religious organizations in disaster: a study of congregational response to disaster. Mass Emergencies 3: 133-142.

Wright, Joseph E.

- 1978 Organizational prestige and task saliency in disaster. Pp. 199-213 in E. L. Quarantelli (ed.), Disasters: Theory and Research. Beverly Hills, California: Sage Publications.

Quarantelli, E. L.

- 1982 Sheltering and Housing After Major Community Disasters: Case Studies and General Observations. Final Report. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 100 pp.

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Jeanne Ballantine, Emily Jo Franklin, and Phyllis Brown, 1974

AGENT: Tornado  
EVENT: Cincinnati Tornado  
DATE: April 4, 1974  
LOCATION: Cincinnati, Ohio, USA

DESCRIPTION:

The tornado which struck a new Cincinnati subdivision killed five persons and injured 207 others. Property damage was confined to the immediate area of the subdivision. There was an official declaration of disaster.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1974

AGENT: Tornado  
EVENT: Brandenburg Tornado  
DATE: April 5, 1974  
LOCATION: Brandenburg, Kentucky, USA

DESCRIPTION:

The tornado killed 71 people in Kentucky, 32 of whom were residents of Brandenburg, which was almost totally destroyed. 150 were injured in the town of 1,700. Property damages in Brandenburg were estimated at \$7 million. Parts of Kentucky were officially declared disaster areas and received \$14 million in federal funding.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1974

AGENT: Tornado

EVENT: Windsor, Ontario Tornado

DATE: April 6, 1974

LOCATION: Windsor, Ontario, Canada

DESCRIPTION:

The Windsor tornado was part of a massive tornado swarm that existed in the area on the fifth and sixth of April. The tornado killed eight people and injured several. A curling rink was completely destroyed and a shopping mall suffered heavy damages.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney M. and G. Alexander Ross  
1974 The Warning Phase Activities of the 1974 Windsor Tornado.  
Working Paper #60. Columbus, Ohio: The Disaster Research  
Center, The Ohio State University. 7 pp.

AGENT: Tornado  
EVENT: Omaha Tornado  
DATE: May 6, 1975  
LOCATION: Omaha, Nebraska, USA

DESCRIPTION:

The Omaha tornado killed three people and injured 200-300 when it severely damaged a residential district. Property damages were estimated at \$156-176 million, with 109 businesses, one school and 287 homes destroyed. One hospital and 650 homes were severely damaged. Parts of Nebraska were officially declared disaster areas and received \$3 million in federal funding.

REPORTS AND PUBLICATIONS:

Farber, Ajon F.

1975 Tornado 1975: the military response to urban disaster. Unpublished Paper. 27 pp.

Ross, G. Alexander

1976 The Emergence and Change of Organization Sets: An Interorganizational Analysis of Ecumenical Disaster Recovery Organizations. Ph.D. dissertation (Sociology) The Ohio State University. 123 pp.

1976 Service Priorities for the Elderly in Natural Disasters--A Research Report. Omaha, Nebraska: Gerontology Program, University of Nebraska. 171 pp.

Kara, Gail

1977 Adjustment to Disaster Impact. M.A. thesis (Sociology) University of Nebraska at Omaha.

McIntire, Matilda S. and Esmail Sadeghi

1977 The pediatrician and mental health in a community wide disaster: lessons from the aftermath of a tornado. Clinical Pediatrics 16: 702-705.

Bell, Bill

1978 Disaster impact and response: overcoming the thousand natural shocks. The Gerontologist 18: 531-539.

Bell, Bill D., Gail Kara, and Constance Batterson

1978 Service utilization and adjustment patterns of elderly tornado victims in an American disaster. Mass Emergencies 3: 71-81.

Rosenberg, Steven A., Paul Fire, and Gay Robinson

1980 Emotional effect of the Omaha tornado. Nebraska Medical Journal 65: 24-26.

AGENT: Tornado  
EVENT: Canton, Illinois Tornado  
DATE: July 23, 1975  
LOCATION: Canton, Illinois, USA

DESCRIPTION:

The Canton tornado caused extensive damage to the downtown business district and a mobile home trailer park: 55 dwellings and 77 mobile homes were destroyed, 415 homes damaged, three persons were killed and 59 were injured. Parts of the state of Illinois were officially declared disaster areas and received \$861,418 in federal funding.

REPORTS AND PUBLICATIONS:

Ross, G. Alexander

1976 The Emergence and Change of Organization Sets: An Interorganizational Analysis of Ecumenical Disaster Recovery Organizations. Ph.D. dissertation (Sociology) The Ohio State University. 123 pp.

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters: Assumption and Reality. New York: Irvington Press.



AGENT: Tornado  
EVENT: Cabot Tornado  
DATE: March 29, 1976  
LOCATION: Cabot, Arkansas, USA

DESCRIPTION:

The Cabot tornado, striking a trailer park and demolishing the business district of Cabot, killed 5 people and injured 54. Property damage was estimated at \$10 million with 300 homes and 50 businesses destroyed. With official declaration of disaster, Arkansas received \$549,000 in federal funding.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Tornado  
EVENT: Canton Tornado  
DATE: March 30, 1976  
LOCATION: Canton, Mississippi, USA

DESCRIPTION:

The Canton tornado killed five persons and injured 150. Its path covered an area 40 miles long and three-fourths of a mile wide. Property damages were estimated at over \$1 million, with 55 homes destroyed and 115 damaged. Parts of Mississippi were officially declared disaster areas and received \$168,882 in federal funding.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Tornado

EVENT: Lemont Tornado

DATE: June 13, 1976

LOCATION: Lemont, Illinois, USA

DESCRIPTION:

The Lemont tornado killed 2 people and injured 35 when it touched down in a residential area of the town. Property damages were estimated at \$6 million with 87 homes destroyed and 82 damaged. Parts of Illinois were officially declared disaster areas and received \$1 million in federal funding.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press,

AGENT: Tornado

EVENT: Warren Tornado

DATE: March 23, 1977

LOCATION: Warren, Arkansas, USA

DESCRIPTION:

The Warren tornado struck without warning, killing 6 people and injuring 86 others, leveling one-third of the town. Property damages were estimated at \$12 million, with many homes and a large furniture plant destroyed. The tornado did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters: Assumption and Reality. New York: Irvington Press.

AGENT: Tornado  
EVENT: Birmingham Tornado  
DATE: April 4, 1977  
LOCATION: Birmingham, Alabama, USA

DESCRIPTION:

The Birmingham tornado killed 24 people and injured 260-270 others. The tornado cut a path approximately 12 miles long and 3/4 of a mile wide, destroying 15-20 homes and damaging over 100 more. Although property damage was estimated in the millions, the area did not warrant official declaration of disaster.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Tornado  
EVENT: Boating Disaster  
DATE: June 17, 1978  
LOCATION: Topeka, Kansas, USA

DESCRIPTION:

The showboat Whippoorwill was struck by a "mini" tornado on Lake Pomona, near Topeka, Kansas. This event took the lives of 16 people and injured 14 others.

REPORTS AND PUBLICATIONS:

Kilijanik, Thomas S.

1980 The Emergence of Interorganizational Communication Networks Following Natural Disasters. Ph.D. dissertation (Sociology) University of Denver.

Kilijanik, Thomas S.

1980 The Emergence of Interorganizational Communication Networks Following Natural Disasters. Denver, Colorado: Department of Sociology, University of Denver. 236 pp.

Kilijanik, Thomas S.

1980 The Night of the Whippoorwill: The Search and Rescue Response to a Boating Disaster. Denver, Colorado: Department of Sociology, The University of Denver. 90 pp.

Kilijanik, Thomas S., Thomas E. Drabek, Christopher R. Adams, and Harriet L. Tammunga

1980 The Emergence of a Post-disaster Communication Network. Denver, Colorado: Department of Sociology, The University of Denver. 21 pp.

AGENT: Tornado

EVENT: Wichita Falls Tornado

DATE: April 10, 1979

LOCATION: Wichita Falls, Texas, USA

DESCRIPTION:

The Wichita Falls tornado was ranked at four on the Fujita scale of tornado strength, placing it among the severest 3% of all tornadoes in the United States. Forty-seven persons were killed; 171 injured required hospitalization; 1,700 injured required some kind of medical attention. More than 3,000 homes in an eleven square mile area were devastated. Wichita Falls was declared a disaster area.

REPORTS AND PUBLICATIONS:

Bolin, Robert

1979 The Impact of Disaster Aid Progress on Long-term Family Recovery. Las Cruces, New Mexico: Department of Sociology, New Mexico State University.

Bolin, Robert

1979 Study of elderly victims of the Wichita Falls tornado. Fargo, North Dakota: Department of Sociology, North Dakota State University. 1 pp.

Kilijanik, Thomas S.

1980 The Emergence of Interorganizational Communication Networks Following Natural Disasters. Ph.D. dissertation (Sociology) University of Denver.

Kilijanik, Thomas S.

1980 The Emergence of Interorganizational Communication Network Following Natural Disasters. Denver, Colorado: Department of Sociology, University of Denver. 236 pp.

Adams, Christopher R., Thomas E. Drabek, Thomas S. Kilijanik, and Harriet L. Tammings

1980 The Organization of Search and Rescue Efforts Following the Wichita Falls, Texas Tornado. Denver, Colorado: Department of Sociology, University of Denver. 23 pp.

Glass, Roger L., Robert B. Craven, Dennis J. Bergman, Barbara Stall, Neil Harowitz, Peter Kerndt, and Joe Winkle

1980 Injuries from the Wichita Falls tornado: implications for prevention. Science 207: 734-738.



Fairchild, Thomas J. and Debra White  
1982 Organizational Response to Mental Health Needs of Elderly  
Disaster Victims. Final Report. Denton, Texas: Center for  
Studies in Aging, North Texas State University.



AGENT: Tornado  
EVENT: Cheyenne Tornado  
DATE: July 16, 1979  
LOCATION: Cheyenne, Wyoming, USA

DESCRIPTION:

The northern edge of Cheyenne was struck by a moderately destructive tornado which destroyed or badly damaged over 400 homes. Approximately 48 persons were seriously injured; one child died as a result of the event.

REPORTS AND PUBLICATIONS:

Drabek, Thomas E.

1980 Taming the Frontierland Tornado: The Emergent Multiorganizational Search and Rescue Network in Cheyenne, Wyoming, July, 1979. Denver, Colorado: Department of Sociology, The University of Denver. 115 pp.

AGENT: Tornado

EVENT: Grand Island Tornado

DATE: June 4, 1980

LOCATION: Grand Island, Nebraska, USA

DESCRIPTION:

A series of tornadoes damaged about 150 square blocks, leaving about 2,000 people homeless.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 Sheltering and Housing after Major Community Disasters:  
Case Studies and General Observations. Final Report. Columbus,  
Ohio: The Disaster Research Center, The Ohio State University.  
100 pp.

H-TOXICOLOGICAL INCIDENT

AGENT: Toxicological Incident  
EVENT: Methyl Alcohol Poisoning  
DATE: October 21-28, 1951  
LOCATION: Atlanta, Georgia, USA

DESCRIPTION:

This incident of methyl alcohol poisoning killed 39 people, blinded 9 others and resulted in the hospitalization of over 200 others.

REPORTS AND PUBLICATIONS:

Bennett, Ivan

1951 A brief account of observations made during an outbreak of methyl alcohol poisoning. Unpublished paper. 13 pp.

Powell, J. W.

1953 The Poison Liquor Episode in Atlanta, Georgia, October, 1951. A Brief Narrative Report of Field Investigation. Unpublished manuscript. 86 pp.

Powell, J. W.

1953 A Poison Liquor Episode in Atlanta, Georgia. College Park, Maryland: Department of Psychiatry, University of Maryland. 16 pp.

AGENT: Toxicological Incident  
EVENT: Chemical Smoke Episode  
DATE: August 1952  
LOCATION: Philadelphia, Pennsylvania, USA

DESCRIPTION:

In a chemical smoke episode, 30 persons were given first aid, and five had to be hospitalized.

REPORTS AND PUBLICATIONS:

Powell, J. W.

1954 An Introduction to the Natural History of Disaster. Baltimore, Maryland: Psychiatric Institute, University of Maryland. 162 pp.

AGENT: Toxicological Incident  
EVENT: Carbon Monoxide Asphyxiation Incident  
DATE: December 8, 1952  
LOCATION: Chicago, Illinois, USA

DESCRIPTION:

A carbon monoxide gas leak in the wholesale and industrial area near Chicago's Loop resulted in medical treatment for 30 persons affected by the fumes. No fatalities resulted.

REPORTS AND PUBLICATIONS:

National Opinion Research Center

1953 Report on a carbon monoxide asphyxiation incident, ABC Manufacturing Company, Chicago, Illinois, December 8, 1952. Chicago, Illinois: National Opinion Research Center.

National Opinion Research Center

1954 Report on a carbon monoxide asphyxiation incident, ABC Manufacturing Company, Chicago, Illinois, December 8, 1952. Pp. 144-166 in E. S. Marks et al. Human Reactions in Disaster Situations, Volume 3. Unpublished manuscript. Chicago, Illinois: National Opinion Research Center.

AGENT: Toxicological Incident  
EVENT: Chlorine Gas Leak  
DATE: January 20, 1953  
LOCATION: Portsmouth, New Hampshire, USA

DESCRIPTION:

No casualties resulted from the chlorine gas leak at the New Hampshire Gas and Light Company, however, 32 persons were injured. The impact of the leak was contained to the plant and its occupants.

REPORTS AND PUBLICATIONS:

Powell, John W.

1954 An Introduction to the Natural History of Disaster.  
Baltimore, Maryland: Psychiatric Institute, University of  
Maryland. 162 pp.

AGENT: Toxicological Incident

EVENT: Chlorine Gas Leak

DATE: July 23, 1953

LOCATION: Edgewood, Maryland, USA

DESCRIPTION:

No one was killed or seriously injured when chlorine gas leaked from a vent line at the Diamond Alkali Plant. Gas concentration, however, forced most area residents to evacuate. The plant was located on the Edgewood Post of the Army Chemical Corps.

REPORTS AND PUBLICATIONS:

Rayner, Jeannette

1953 Edgewood gas episode, July 28, 1953--preliminary narrative. Unpublished preliminary report. Baltimore, Maryland: Disaster Study Project, University of Maryland. 14 pp.



AGENT: Toxicological Incident

EVENT: Smog Blackout

DATE: January 16, 1955

LOCATION: London, England

DESCRIPTION:

Dense clouds of black smoke settled on parts of the city for about 10 minutes. There were no deaths or destruction.

REPORTS AND PUBLICATIONS:

1955 The Great London Blackout. London, England: Institute for Community Studies. 52 pp.

AGENT: Toxicological Incident

EVENT: Toxic Gas

DATE: August 12, 1960

LOCATION: "Bayview" (small Southern town)

DESCRIPTION:

No one was killed but 64 persons were affected when an unknown toxic gas drifted into the town of about 5,000 people probably from one of the chemical plants in the area.

REPORTS AND PUBLICATIONS:

Hesbacher, P. T. and Louis Segaloff

1961 The Bayview Gas Scare (Task Stagger). Philadelphia, Pennsylvania:  
Institute for Cooperative Research, University of Pennsylvania.  
26 pp.

AGENT: Toxicological Incident

EVENT: Chlorine Gas Exposure

DATE: January 31, 1961

LOCATION: New Roads and Morganza, Louisiana, USA

DESCRIPTION:

Chlorine gas spread from a 17-car derailment, killing one person and injuring 140 others in a six and a half by three mile area.

REPORTS AND PUBLICATIONS:

Segaloff, Louis

1961 Task Sirocco: Community Reaction to an Accidental Chlorine Exposure. Philadelphia, Pennsylvania: Institute for Cooperative Research. 42 pp.

AGENT: Toxicological Incident  
EVENT: Ammonia Vapor Exposure  
DATE: August 1, 1961  
LOCATION: Peoria Suburbs, Illinois, USA  
DESCRIPTION:

A cloud of anhydrous ammonia spread over Peoria, affecting 40 persons but killing no one. As a precautionary measure, 13,000 people were forced to evacuate. The leak was a result of a ruptured pipe used to discharge the substance from a barge.

REPORTS AND PUBLICATIONS:

Albert, Michael B. and Louis Segaloff

1962 Task Silence: The Post-midnight Alarm and Evacuation of Four Communities Affected by an Ammonia Gas Release. Philadelphia, Pennsylvania: Institute for Cooperative Research. 37 pp.

AGENT: Toxicological Incident  
EVENT: Chlorine Gas Incident  
DATE: July 30, 1968  
LOCATION: Charleston, West Virginia, USA

DESCRIPTION:

Fifteen thousand people were forced to evacuate their homes when chlorine gas fumes resulted from fire at an inorganic chemical plant. There were no fatalities, however, 27 people were hospitalized.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1968

AGENT: Toxicological Incident  
EVENT: Chlorine Leak Threat  
DATE: April 1, 1972  
LOCATION: Louisville, Kentucky, USA

DESCRIPTION:

The possibility of a chlorine gas leak prompted the evacuation of 4,000 persons along the Ohio River Valley near Louisville. The source of the threat was a runaway barge containing 640 tons of liquid chlorine that had wedged itself against a dam on the river. The barge was stabilized and residents returned to their homes; no one was injured.

REPORTS AND PUBLICATIONS:

Fitzpatrick, John S. and Jerry J. Waxman  
1972 Louisville, Kentucky Chlorine Leak Threat and Evacuation:  
Observations on Community Coordination. Working Paper #44.  
Columbus, Ohio: The Disaster Research Center, The Ohio State  
University. 12 pp.

AGENT: Toxicological Incident

EVENT: Air Pollution Threat

DATE: July 7, 1973

LOCATION: Steubenville, Ohio, USA

DESCRIPTION:

Air quality over the heavily industrialized upper Ohio Valley approached the warning level, however, there were no casualties partly due to notable cutbacks by industry.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1973

AGENT: Toxicological Incident  
EVENT: Hydrogen Sulphide Gas Leak  
DATE: October 2, 1973  
LOCATION: Camrose, Alberta, Canada

DESCRIPTION:

An oil well emitted hydrogen sulphide gas and caused the evacuation of several thousand people in Camrose. The gas leak endangered nearby farmers, villagers, and a small city.

REPORTS AND PUBLICATIONS:

Ponting, J. Rick

1974 It can't happen here: a pedagogical look at community coordination in response to a toxic gas leak. Emergency Planning Digest 1: 8-13.



AGENT: Toxicological Incident  
EVENT: Chemical Plant Explosion  
DATE: June 1, 1974  
LOCATION: Flixborough, England

DESCRIPTION:

On the afternoon of June 1, 1974 an explosion rocked the Nypro Limited chemical plant at Flixborough. In the blast the plant was destroyed, 28 persons were killed and severe damage was done to the villages surrounding the plant.

REPORTS AND PUBLICATIONS:

Westgate, Kenneth

1975 Flixborough--The Human Response. Bradford, England: Disaster Research Unit, University of Bradford. 30 pp.

AGENT: Toxicological Incident

EVENT: TCDD Release

DATE: July 10, 1976

LOCATION: Seveso, Italy

DESCRIPTION:

An explosion at a chemical factory released a cloud of vapor which contaminated the surrounding area. The vapor consisted of sodium trichlorophinate and an extremely toxic by-product, tetrachlorodibenzopara-dioxin (TCDD). Thirty people were hospitalized for symptoms of burns and poisoning; 730 individuals were evacuated from the area most severely contaminated.

REPORTS AND PUBLICATIONS:

Hay, Alastair

1977 Tetrachlorodibenzo-p-dioxin release at Seveso. Disasters 1: 289-308.

Hay, Alastair

1978 Seveso: no answers yet. Disasters 2: 163-168.

AGENT: Toxicological Incident  
EVENT: Chlorine Gas Threat  
DATE: December 10, 1976  
LOCATION: Baton Rouge, Louisiana, USA

DESCRIPTION:

A natural gas explosion made a chlorine gas tank rupture. Spilled gas covered an area 42 miles long and four miles wide. Three persons were treated for inhalation problems associated with the gas spill. Four to five hundred persons were evacuated from the surrounding area in addition to 6,000 students from a nearby university.

REPORTS AND PUBLICATIONS:

1976 Chlorine Gas Threat. Field Report #39. Columbus, Ohio: The Disaster Research Center, The Ohio State University.

AGENT: Toxicological Incident

EVENT: Carbon Monoxide Leak

DATE: January 28, 1977

LOCATION: Opelika, Alabama, USA

DESCRIPTION:

A high concentration of carbon monoxide gas, emitted from 28-30 fork-lift trucks, resulted in the hospitalization of 29 people and treatment of 67 others. No one was seriously injured and only those in the immediate area were affected.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Toxicological Incident

EVENT: Midland Chlorine Gas Leak

DATE: October 7, 1977

LOCATION: Midland, Michigan

DESCRIPTION:

A gas leak from a chemical plant presented a minor threat for the area.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1977

AGENT: Toxicological Incident  
EVENT: Propane Tank Car Explosion  
DATE: February 24, 1978  
LOCATION: Waverly, Tennessee, USA

DESCRIPTION:

A derailed tank car containing liquified petroleum gas ruptured. The ensuing fire killed 16 persons, injured 43 others, and did \$1,800,000 worth of damage.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident

EVENT: Chlorine Gas Release

DATE: February 26, 1978

LOCATION: Youngstown, Florida, USA

DESCRIPTION:

Forty-four cars containing chlorine, caustic soda, LP gas, ammonium nitrate, and turpentine derailed; one chlorine car was heavily punctured. Chlorine gas leaked and formed a vapor cloud which spread over a wide area. Eight people were killed by the vapor; 89 were sent to nearby hospitals.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Tank Explosion and Fire  
DATE: May 30, 1978  
LOCATION: Texas City, Texas, USA

DESCRIPTION:

A series of explosions severely damaged a refining company in the center of an industrial complex. Six people were killed and twenty others were injured. Two railroad tank cars containing tetraethyl lead also exploded. Approximately 10% of the refinery was destroyed. Contingent property and the inhabitants were threatened.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.



AGENT: Toxicological Incident  
EVENT: Calcium Carbide Incident  
DATE: January 10, 1979  
LOCATION: Marthfield, Ohio, USA

DESCRIPTION:

A tractor-trailer rig and cargo of flammable calcium carbide overturned. Two of seven cannisters ruptured and spilled onto the highway. The driver sustained injuries resulting from the accident. Approximately 80 people were evacuated for over five hours.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Train Derailment and Fire  
DATE: February 10, 1979  
LOCATION: Ridgway, Pennsylvania, USA

DESCRIPTION:

Nine cars carrying crude oil derailed as the result of the loss of a wheel. A punctured tank car spilled crude oil through a residential district. Heat from the axle caused a combustion of the flowing oil. No deaths or injuries occurred, but property losses were significant. Approximately 100 persons evacuated the area until the fire was contained.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Derailment and Toxic Cloud  
DATE: February 13, 1979  
LOCATION: Big Run, Pennsylvania, USA

DESCRIPTION:

Three cars containing hazardous materials derailed in transit. One car, containing nitrating acid, ruptured and spilled 5,000 gallons of its cargo. The other two leaked chlorine which formed a vapor cloud, necessitating evacuation of 1,000 persons from the surrounding vicinity. About 30 persons were treated for fume inhalation problems. The toxic cloud's effects created a substantial fish kill in a nearby stream.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Plant Explosion and Toxic Cloud  
DATE: March 7, 1979  
LOCATION: Crystal City, Texas, USA

DESCRIPTION:

A facility containing agricultural chemicals caught on fire and precipitated subsequent explosions. Smoke and gaseous fumes enveloped the area for several hours. Property and inventory losses were estimated at \$150,000. About 6,000 residents were evacuated.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Calcium Oxide Threat  
DATE: March 18, 1979  
LOCATION: Robertson County, Tennessee, USA

DESCRIPTION:

Six trucks carrying calcium oxide were stopped on the highway and found to be very hot. Truck drivers were advised to move the trucks to an isolated area. All of the truck drivers were medically evacuated to a hospital. Rising temperatures of the trucks cargoes threatened the area with spontaneous ignition, fire, and toxic fumes. Responders monitored the temperature of the calcium oxide, which was later dumped into an abandoned quarry.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Phosphorous Fumes and Fire  
DATE: March 22, 1979  
LOCATION: Gettysburg, Pennsylvania, USA

DESCRIPTION:

A tractor-trailer carrying a mixture of red and yellow phosphorous erupted into flames. The cause of the explosion was believed to be the result of a brake dysfunction which precipitated a fire around the rear tandem wheels of the trailer. Secondary explosions and toxic fumes forced the evacuation of all residents within a two-block radius of the site.

REPORTS AND PUBLICATIONS:

Gray, Jane

- 1981 Three Case Studies of Organizaed Responses to Chemical Disasters. Miscellaneous Report #29. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 60 pp.

Quarantelli, E. L.

- 1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Derailment and Toxic Clouds  
DATE: April 8, 1979  
LOCATION: Crestview, Florida, USA

DESCRIPTION:

Twenty-two cars of a train containing toxic chemicals such as chlorine, anhydrous ammonia, liquid sulfur, and carbon tetrachloride derailed and caught fire. Gas from ruptured anhydrous ammonia cars formed a white cloud of ammonium chloride. Six persons were injured as a result of the incident and subsequent response operations. Evacuation of the area involved 5,000 people.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident

EVENT: Fertilizer Plant Fire

DATE: May 1, 1979

LOCATION: Atlanta, Ohio, USA

DESCRIPTION:

A fire which completely enveloped a fertilizer plant in flames spread to canisters of liquid fertilizer stored in the building. The canisters subsequently exploded, sending fireballs nearly 108 feet into the air. Nearly all of Atlanta's residents were forced to evacuate because of spreading smoke and toxic fumes. The company's losses were estimated at \$400,000.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.



AGENT: Toxicological Incident  
EVENT: Chemical Explosion and Fire  
DATE: May 14, 1979  
LOCATION: Harvey, Louisiana, USA

DESCRIPTION:

A large tank containing ethyl alcohol ignited and exploded within a chemical manufacturing and storage facility. No serious casualties occurred as a result of the incident, yet six fire personnel were treated at the emergency room of a nearby hospital for minor eye irritation.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Fertilizer Plant Fire  
DATE: June 17, 1979  
LOCATION: Jacksonville, Florida, USA

DESCRIPTION:

A chemical plant fire resulted in the loss of two-thirds of the plant's capacity. Buildings affected were a total loss. Forty-five persons were treated for smoke and toxic fume inhalation. Evacuation estimates range from 2,000 to 5,000 in the affected area of the city.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Chemical Plant Fire  
DATE: July 5, 1979  
LOCATION: Memphis, Tennessee, USA

DESCRIPTION:

An explosion occurred in a chemical company which stores and manufactures herbicides and pesticides. The explosion and fire caused the release of toxicological substances into the air, forming a toxic cloud. Approximately 3,000 people were evacuated from a 1-mile area. Damage to the plant was estimated at \$2.5-3.5 million. Civilian and fire personnel injuries were primarily caused by toxic fumes.

REPORTS AND PUBLICATIONS:

Gray, Jane

1981 Three Case Studies of Organized Responses to Chemical Disasters. Miscellaneous Report #29. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 60 pp.

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Sulfur Fire and Toxic Cloud  
DATE: August 25, 1979  
LOCATION: Orchard, Texas, USA

DESCRIPTION:

No serious casualties occurred as a result of a fire at an abandoned sulfur mine. Four individuals were treated for respiratory distress. Property losses existed in the form of crop damage caused by a sulfur cloud which dissipated the following day.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident  
EVENT: Propane Tank Car Derailment  
DATE: September 25, 1979  
LOCATION: Everett, Washington, USA

DESCRIPTION:

Nine cars of a freight train derailed near the end of the Hewitt tunnel. One car, filled with liquified propane gas overturned. There were no major injuries or destruction as a result of the incident.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

AGENT: Toxicological Incident

EVENT: Chlorine Gas Threat

DATE: November 11, 1979

LOCATION: Mississauga, Canada

DESCRIPTION:

A Canadian Pacific Railroad's train of 110 cars, 40 of which carried butane, propane, styrene, propylene, toluene, and chlorine, developed a wheel assembly problem. The wheel assembly malfunction caused a derailment of 25 cars. A series of explosions followed the derailment. The chlorine tanker was one of the derailed cars and leaked gas. Local responders evacuated 220,000 residents, 3 hospitals, and several nursing homes. Less than a dozen injuries resulted; no deaths were reported. Estimates of total damages incurred includes losses of 25 railroad cars, track, roadbed, as well as loss of income to those evacuated from the area.

REPORTS AND PUBLICATIONS:

Whyte, Anne

1980 Survey of Households Evacuated During the Mississauga Chlorine Gas Emergency. Toronto, Canada: Institute for Environmental Studies, University of Toronto. 44 pp.

Scanlon, Joseph and Massey Padgham

1980 The Peel Regional Police Force and the Mississauga Evacuation. Toronto, Canada; Canadian Police College. 112 pp.

Gray, Jane

1981 Three Case Studies of Organized Responses to Chemical Disasters. Miscellaneous Report #29. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 60 pp.

Quarantelli, E. L.

1981 Sociobehavioral Responses to Chemical Hazards: Preparations for and Responses to Acute Chemical Emergencies at the Local Community Level. Final Project Report #28. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 133 pp.

I--TRANSPORTATION ACCIDENT

AGENT: Transportation Accident

EVENT: Airshow Plane Crash

DATE: September 15, 1951

LOCATION: Flagler, Colorado, USA

DESCRIPTION:

An airshow plane crashed into a crowd of spectators, killing 21 persons, 13 of whom were children. Approximately 30 persons were injured.

REPORTS AND PUBLICATIONS:

1953 Report on an airshow plane crash in Flagler, Colorado, September 15, 1951. Pp. 164-182 in Conference on Field Studies of Reactions to Disasters. Chicago, Illinois: National Opinion Research Center.

1954 Report on an airshow plane crash in Flagler, Colorado, September 15, 1951. Pp. 1-20 in Eli Marks, C. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished manuscript. Chicago, Illinois: National Opinion Research Center.

Krauss, I.

1955 Individual and Group Behavior in a Disaster. M. A. thesis (Sociology) University of Chicago. 124 pp.



AGENT: Transportation Accident  
EVENT: Elizabeth Plane Crash #1  
DATE: December 16, 1951  
LOCATION: Elizabeth, New Jersey, USA

DESCRIPTION:

The December 16, 1951 Elizabeth, New Jersey plane crash was the first of three plane crashes to occur in Elizabeth within a two month time period. As a result of this crash, 56 passengers were killed and one Elizabeth resident was injured.

REPORTS AND PUBLICATIONS:

Bucher, Rue

1954 Blame in Disasters: A Study of a Problematic Situation.  
M. A. thesis (Sociology) University of Chicago.

Powell, John W.

1954 An Introduction to the Natural History of Disaster. Baltimore, Maryland: Psychiatric Institute, University of Maryland. 162 pp.

Fritz, C. E. and E. S. Marks

1954 The NORC studies of human behavior in disaster. Journal of Social Issues 10: 26-41.

1954 Report on the Elizabeth, New Jersey plane crashes: a study in blame. Pp. 76-95 in E. S. Marks, C. E. Fritz et al., Human Reactions in Disaster Situations. Unpublished manuscript. Chicago, Illinois: National Opinion Research Center.

Bucher, Rue

1957 Blame and hostility in disaster. American Journal of Sociology 62: 467-475.

AGENT:       Transportation Accident  
EVENT:       Elizabeth Plane Crash #2  
DATE:        January 22, 1952  
LOCATION:      Elizabeth, New Jersey, USA

DESCRIPTION:

The January 22, 1952 Elizabeth, New Jersey plane crash was the second of three plane crashes to occur in Elizabeth within a two month time period. The plane crashed into an apartment house, killing seven residents and 23 of its passengers.

REPORTS AND PUBLICATIONS:

Bucher, Rue

- 1954      Blame in Disasters: A Study of a Problematic Situation.  
          M. A. thesis (Sociology) University of Chicago.

Powell, John W.

- 1954      An Introduction to the Natural History of Disaster.  
          Baltimore, Maryland: Psychiatric Institute, University of  
          Maryland. 162 pp.

Fritz, C. E. and E. S. Marks

- 1954      The NORC studies of human behavior in disaster. Journal of  
          Social Issues 10: 26-41.

- 1954      Report on the Elizabeth, New Jersey plane crashes: a study in  
          blame. Pp. 76-95 in E. S. Marks, C. E. Fritz et al., Human  
          Reactions in Disaster Situations, Volume 3. Unpublished manu-  
          script. Chicago, Illinois: National Opinion Research Center.

Bucher, Rue

- 1957      Blame and hostility in disaster. American Journal of Sociology  
          62: 467-475.

AGENT: Transportation Accident  
EVENT: Elizabeth Plane Crash #3  
DATE: February 11, 1952  
LOCATION: Elizabeth, New Jersey, USA

DESCRIPTION:

The February 11, 1952 Elizabeth, New Jersey plane crash was the third of three plane crashes to occur in Elizabeth within a two month time period. The plane crashed into an apartment house, injuring 43 persons, killing four residents, and 27 passengers and crew members.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1953 A Study in Panic: Its Nature, Types, and Conditions.  
M. A. thesis (Sociology) University of Chicago. 168 pp.

Bucher, Rue

1954 Blame in Disasters: A Study of a Problematic Situation.  
M. A. thesis (Sociology) University of Chicago.

Powell, John W.

1954 An Introduction to the Natural History of Disaster. Baltimore, Maryland: Psychiatric Institute, University of Maryland. 162 pp.

Fritz, C. E. and E. S. Marks

1954 The NORC studies of human behavior in disaster. Journal of Social Issues 10: 26-41.

1954 Report on the Elizabeth, New Jersey plane crashes: a study in blame. Pp. 76-95 in E. S. Marks, C. E. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished manuscript. Chicago, Illinois: National Opinion Research Center.

Bucher, Rue

1957 Blame and hostility in disaster. American Journal of Sociology 62: 467-475.

AGENT: Transportation Accident  
EVENT: Commuter Train Crash  
DATE: October 8, 1952  
LOCATION: Northwest London, England

DESCRIPTION:

Two express trains crashed into a commuter local, killing 98 people and injuring 200. The crash occurred during the morning rush hour at the Harrow and Wealdstone Station, 11 miles northwest of London.

REPORTS AND PUBLICATIONS:

Braswell, Colonel L. R.

1953 U.S. Air Force assistance after the Harrow train wreck.  
Pp. 8-12 in Studies in Military Assistance in Civilian  
Disasters: England and the United States. Washington, D. C.:  
Committee on Disaster Studies, National Academy of Sciences.

AGENT:       Transportation Accident  
EVENT:       School Bus Fire  
DATE:        March 1, 1955  
LOCATION:     Silver Spring, Maryland, USA

DESCRIPTION:

A school bus caught fire but there were no injuries.

REPORTS AND PUBLICATIONS:

Rayner, Jeannette

1955   Exploratory investigation of Silver Spring school bus fire.  
Unpublished memorandum. Washington, D. C.: Committee on  
Disaster Studies, National Academy of Sciences.

AGENT:       Transportation Accident  
EVENT:       Andrea Doria Ship Disaster  
DATE:        July 25, 1956  
LOCATION:      Off the coast of Nantucket Island, Massachusetts, USA

DESCRIPTION:

Off the coast of Nantucket Island, the Swedish liner Stockholm smashed into the starboard side of the Italian liner, Andrea Doria, resulting in one of the worst disasters in maritime history. Fifty-two persons were killed, 1,654 were saved by rescue ships.

REPORTS AND PUBLICATIONS:

Friedman, Paul and Louis Linn  
1957    Some psychiatric notes on the Andrea Doria disaster.  
          American Journal of Psychiatry 114: 426-432.

AGENT:       Transportation Accident  
EVENT:       Airplane Crash  
DATE:        December 1, 1959  
LOCATION:      Williamsport, Pennsylvania, USA

DESCRIPTION:

Bad weather conditions caused an Allegheny Airlines twin-engine plane to crash into a mountainside during an attempted landing. The crash resulted in the deaths of 25 of the 26 passengers and crew members.

REPORTS AND PUBLICATIONS:

Sonder, Otto L., Jr.

1960    The Allegheny airline disaster: a study of spectator and rescue personnel reactions. Paper presented at the annual meeting of the Pennsylvania Sociological Society.

Sonder, Otto L., Jr.

1960    The campus reacts to disaster. Lycoming Alumni Bulletin 13: 8-11.

AGENT:       Transportation Accident

EVENT:       Airplane Crash

DATE:        December 8, 1963

LOCATION:     Elkton, Maryland, USA

DESCRIPTION:

A PanAm jet bound for Philadelphia crashed into a Maryland cornfield, killing 82 passengers.

REPORTS AND PUBLICATIONS:

Latane, Bibb and Ladd Wheeler

1966       Emotionality and reactions to disaster. Journal of Experimental Social Psychology Supplement 1: 95-102.



AGENT:       Transportation Accident

EVENT:       Wichita Plane Crash

DATE:        January 16, 1965

LOCATION:     Wichita, Kansas, USA

DESCRIPTION:

An Air Force KC-135 tanker plunged into a heavily populated neighborhood in Wichita, killing 29 people and injuring many.

REPORTS AND PUBLICATIONS:

Cotter, Cornelius P.

1968     Jet Tanker Crash: Urban Response to Military Disaster.  
Lawrence, Kansas: The University Press of Kansas. 191 pp.

AGENT:       Transportation Accident

EVENT:       Plane Crash

DATE:        November 8, 1965

LOCATION:     Greater Cincinnati Airport, Kentucky, USA

DESCRIPTION:

A Boeing 727 crashed into a hill near the Greater Cincinnati  
Airport killing 58 persons.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1965

AGENT:       Transportation Accident  
EVENT:       Ammunition Train Derailment  
DATE:        August 14, 1968  
LOCATION:     Urbanna, Ohio, USA

DESCRIPTION:

The possibility of explosion following the derailment of an ammunition train prompted the evacuation of 4,000 persons from their homes; however, the explosion did not occur. There were no casualties and damage was limited to the train and track.

REPORTS AND PUBLICATIONS:

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The Disaster Research Center, 1968

AGENT: Transportation Accident

EVENT: Airplane Crash

DATE: October 25, 1968

LOCATION: Lebanon, New Hampshire, USA

DESCRIPTION:

A Northeast plane flight with 42 persons crashed into a mountainside killing 32 persons.

REPORTS AND PUBLICATIONS:

Vosburg, Robert L.

1975 Disaster alert and the community mental health center.  
Community Mental Health Journal 7: 24-28.

AGENT: Transportation Accident  
EVENT: Airplane Crash  
DATE: October 25, 1968  
LOCATION: Lebanon, New Hampshire, USA

DESCRIPTION:

A plane crashed en route from Boston to Lebanon, New Hampshire, killing 32 people and injuring the 10 survivors.

REPORTS AND PUBLICATIONS:

Pine, Vanderlyn R.

1969 The role of the funeral director in disaster. The Director 39: 11-13.

Pine, Vanderlyn R.

1969 Social organizations in disaster. The Director 39: 3-5.

Pine, Vanderlyn R.

1970 Grief work and dirty work: the aftermath of an air crash. Paper presented at the 40th annual meeting of the Eastern Sociological Society, April 18, 1970. 12 pp.

Pine, Vanderlyn R.

1974 Grief work and dirty work: the aftermath of a plane crash. Omega 5: 281-286.

AGENT: Transportation Accident  
EVENT: School Bus/Train Accident  
DATE: March 24, 1972  
LOCATION: Pomona, New York, USA

DESCRIPTION:

Five persons were killed and 47 injured when a school bus carrying 52 teenagers collided with an 82-car freight train at an unguarded crossing. Both the bus and train were severely damaged as a result of the accident.

REPORTS AND PUBLICATIONS:

Grossman, Leona

1973 Train crash: social work and disaster services. Social Work 18: 38-46.

Tuckman, Alan J.

1973 Disaster and mental health intervention. Community Mental Health Journal 9: 151-157.

AGENT: Transportation Accident

EVENT: Train Crash

DATE: October 30, 1972

LOCATION: Chicago, Illinois, USA

DESCRIPTION:

A commuter train rear-end collision resulted in 74 deaths and 290 injuries.

REPORTS AND PUBLICATIONS:

Grossman, L.

1973 Train crash: social work and disaster services. Social Work  
18: 38-44.

Moulthrop, M. A., E. H. Uhlenhuth, A. Abbott, H. M. Evans, E. H. Stein,  
and K. E. Sullivan

1973 A preliminary survey of some characteristics of people  
seeking psychotherapeutic help following a train crash.  
Paper presented at the NIMH Continuing Education Seminar  
on Emergency Mental Health Services, June 22-24. Washington,  
D. C. 22 pp.

AGENT: Transportation Accident

EVENT: Plane Crash

DATE: December, 1972

LOCATION: Chicago, Illinois, USA

DESCRIPTION:

A plane crash at Chicago's Midway Airport injured nine people, however, no fatalities resulted.

REPORTS AND PUBLICATIONS:

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M. A. Moulthrop et al., 1972



AGENT:       Transportation Accident  
EVENT:       Boston Subway Car Collision  
DATE:        August 1, 1975  
LOCATION:     Boston, Massachusetts, USA

DESCRIPTION:

Three trains collided in a tunnel near the Charles Street Station at Boston's M.B.T.A. (the rapid transit system). Although no one was killed, approximately 140 persons were injured.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982    The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident

EVENT: Bus Wreck

DATE: August 15, 1975

LOCATION: Tiffin, Ohio, USA

DESCRIPTION:

A chartered bus carrying a group of senior citizens overturned on State Route 67, south of Milmore, Ohio, killing one person and injuring 45.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters: Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident

EVENT: Multiple Car Pile-up

DATE: January 2, 1976

LOCATION: Syracuse, New York, USA

DESCRIPTION:

Hazardous road conditions due to freezing rain resulted in a 52 motor vehicle pile-up. No one was killed; 55 persons were injured.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT:       Transportation Accident  
EVENT:       Chicago Commuter Train Crash  
DATE:        January 9, 1976  
LOCATION:      Chicago, Illinois, USA

DESCRIPTION:

While making a station stop, a parked commuter train was struck by another commuter train. An estimated 600 commuters were involved in the accident. One person was killed and 381 persons were injured.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982    The Delivery of Emergency Medical Services in Disasters:  
         Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident  
EVENT: Plane Crash in St. Thomas  
DATE: April 27, 1976  
LOCATION: St. Thomas, Virgin Islands, USA

DESCRIPTION:

An American Airlines 727 overshot the runway and crashed into a service station while attempting to land at the Truman Airport. The crash and resulting explosion killed 37 of the 88 passengers aboard the plane and injured 57.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident  
EVENT: Philadelphia Plane Crash  
DATE: June 23, 1976  
LOCATION: Philadelphia, Pennsylvania, USA

DESCRIPTION:

No fatalities resulted when an Allegheny Airlines plane skidded upon landing at the Philadelphia International Airport. All of the 99 passengers and four crew members were injured.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident  
EVENT: Birmingham Train Wreck  
DATE: January 16, 1977  
LOCATION: Birmingham, Alabama, USA

DESCRIPTION:

No fatalities resulted from the derailment of a passenger train in Birmingham. As a precautionary measure, 149 people were sent to hospitals, however, only two were hospitalized.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT: Transportation Accident

EVENT: Chicago Train Crash

DATE: February 4, 1977

LOCATION: Chicago, Illinois, USA

DESCRIPTION:

Eleven people were killed and 183 were injured when a Chicago Transit Authority train struck the rear of another train, causing four cars to fall from the elevated rail structure. Property damage was estimated at \$1.2 million.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.



AGENT: Transportation Accident

EVENT: Atlanta Plane Crash

DATE: April 4, 1977

LOCATION: Atlanta, Georgia, USA

DESCRIPTION:

A Southern Airlines DC-9 exploded and killed 70 people when the pilot attempted to make an emergency landing on Highway 92. The explosion occurred when the plane hit a car and gas pumps. The eight passengers in the car were killed. Severe burns caused the hospitalization of 23 people.

REPORTS AND PUBLICATIONS:

Quarantelli, E. L.

1982 The Delivery of Emergency Medical Services in Disasters:  
Assumption and Reality. New York: Irvington Press.

AGENT:       Transportation Accident

EVENT:       Plane Crash

DATE:        November 28, 1979

LOCATION:     Antarctica

DESCRIPTION:

A DC-10 plane from New Zealand taking tourists on a trip over the Ross Sea area in the Antarctica crashed and killed 237 passengers and 20 crew members. A major effort was made to recover and bring back all the bodies to New Zealand.

REPORTS AND PUBLICATIONS:

Taylor, A. J. W. and A. G. Frazer

1981   Psychological Sequelae of Operation Overdue Following the DC-10  
Aircrash in Antarctica. Wellington, New Zealand: Department  
of Psychology, Victoria University of Wellington. 72 pp.

J-TSUNAMI

J-1

AGENT: Tsunami  
EVENT: Hawaii Tsunami  
DATE: May 23, 1960  
LOCATION: Hilo, Hawaii, USA

DESCRIPTION:

Tsunami from a Chilean earthquake spread through the Pacific Ocean affecting western United States coasts, as well as Japanese and Hawaiian islands. In Hilo, Hawaii, 61 people were killed and 300 others were injured. Property damage was estimated at \$20 million with over 500 homes and businesses destroyed. Parts of Hawaii were officially declared disaster areas and received \$972,508 in federal funding.

REPORTS AND PUBLICATIONS:

- Bonk, W. J., R. Lachman, and M. Tatsuoka  
1960 A Report of Human Behavior During the Tsunami of May 23, 1960.  
Hilo, Hawaii: Hawaiian Academy of Sciences, Hawaii Division.  
23 pp.
- Lachman, R., M. Tatsuoka, and W. J. Bonk  
1961 Human behavior during the tsunami of May 1960. Science 133:  
1405-1409.

AGENT: Tsunami  
EVENT: Crescent City Tsunami  
DATE: March 27, 1964  
LOCATION: Crescent City, California, USA

DESCRIPTION:

In Crescent City, 29 city blocks were affected by a tsunami that killed 11 persons and injured 24. Damage to business and harbor areas of the town was extensive, however, injuries and casualties were minimal because the wave struck after business hours. The state of California received \$1.25 million in federal funding following official declaration of disaster.

REPORTS AND PUBLICATIONS:

Yutzy, Daniel

1964 Aesop 1964, Contingencies Affecting the Issuing of Public Disaster Warnings at Crescent City, California. Research Note #4. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 8 pp.

Anderson, William A.

1967 Seismic sea wave warnings in Crescent City, California and Hilo, Hawaii. Research Report #13. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 27 pp.

Anderson, William A.

1969 Disaster warning and communication processes in two communities. The Journal of Communication 19: 92-104

Anderson, William A.

1970 Tsunami warning in Crescent City, California and Hilo, Hawaii. Pp. 116-124 in The Great Alaska Earthquake of 1964. Human Ecology Volume edited by the Committee on the Alaska Earthquake of the National Research Council. Washington, D. C.: National Academy of Sciences.

AGENT: Tsunami  
EVENT: Tsunami Threat  
DATE: February 3, 1965  
LOCATION: Crescent City, California, USA

DESCRIPTION:

Crescent City was threatened by a tsunami, forcing the evacuation of 1500 people. No casualties or damage occurred as a result of the threat.

REPORTS AND PUBLICATIONS:

Anderson, William A.

1965 Crescent City revisited: a comparison of public warning procedures used in 1964 and 1965 emergencies. Research Note #1. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 14 pp.

Anderson, William A.

1965 Seismic sea wave warning in Crescent City, California and Hilo, Hawaii. Research Report #13. Columbus, Ohio: The Disaster Research Center, The Ohio State University. 27 pp.

Anderson, William A.

1969 Disaster warning and communication processes in two communities. Journal of Communication 19: 92-104.

Anderson, William A.

1970 Tsunami Warning in Crescent City, California and Hilo, Hawaii. Pp. 116-124 in The Great Alaska Earthquake of 1964. Human Ecology Volume edited by the Committee on the Alaska Earthquake of the National Research Council, Washington, D. C.: National Academy of Sciences.

AGENT: Tsunami  
EVENT: Sitka Tsunami  
DATE: July 30, 1972  
LOCATION: Sitka, Alaska, USA

DESCRIPTION:

No deaths or injuries resulted from the Sitka tsunami. The duration of the tremors were short but severe, with \$9,000 estimated property damages.

REPORTS AND PUBLICATIONS:

Haas, J. Eugene and Patricia B. Trainer  
1973 Effectiveness of the tsunami warning system in selected coastal towns in Alaska. Paper presented at the Fifth World Conference on Earthquake Engineering, Rome, Italy, June 25-29, 1973.

K-VOLCANIC ERUPTION



AGENT: Volcanic Eruption  
EVENT: Mt. Lamington Eruption  
DATE: January 21, 1951  
LOCATION: Mt. Lamington, New Guinea

DESCRIPTION:

A volcanic eruption killed about 4,000 and forced another 5,000 to evacuate.

REPORTS AND PUBLICATIONS:

Belshaw, C. S.

1951 Social consequences of the Mt. Lamington eruption. Oceania 21: 241-253.

Keesing, F. M.

1952 The Papuan Orokaiva vs Mt. Lamington. Human Organization 2: 16-22.

AGENT: Volcanic Eruption  
EVENT: Kapoho Volcano  
DATE: January 13 - February 7, 1960  
LOCATION: Kapoho, Hawaii, USA

DESCRIPTION:

The volcanic eruption in Kapoho completely destroyed the village, however, the 250 inhabitants had evacuated before the lava engulfed the village and did several million dollars in damages.

REPORTS AND PUBLICATIONS:

- Lachman, Roy and William J. Bonk  
1960 Behavior and beliefs during the recent volcanic eruption at  
Kapoho, Hawaii. Science 131: 1095-1096.
- Lachman, Roy and William J. Bonk  
1960 Research on behavior and beliefs during the current volcanic  
eruption, evacuation, and destruction of Kapoho, Hawaii.  
Unpublished manuscript.

AGENT: Volcanic Eruption  
EVENT: Tristan da Cunha Volcano  
DATE: October 8, 1961  
LOCATION: Tristan da Cunha, South Atlantic

DESCRIPTION:

Lava flooded into the village of Tristan da Cunha, a British island, and forced 260 islanders to evacuate. Only one home was damaged; however, fields were buried and the fishing industry, one factory, and two docks were destroyed.

REPORTS AND PUBLICATIONS:

Much, Peter A.

1971 Crisis in Utopia: The Ordeal of Tristan da Cunha. New York:  
Thomas Y. Crowell. 324 pp.

AGENT: Volcanic Eruption  
EVENT: Taal Volcano  
DATE: September 28, 1965  
LOCATION: Tagaytay, Batangas, Philippines

DESCRIPTION:

The eruption caused 50 million meters of rocks, mud and ashes to bury and destroy several communities in Tagaytay. Many people were injured and 200-300 people were killed. Approximately 1,300 families were left homeless.

REPORTS AND PUBLICATIONS:

Carroll, John J. and Salvador A. Parco  
1966 Social Organization in a Crisis Situation: The Taal Disaster.  
Manila: Philippine Sociological Society. 59 pp.

AGENT: Volcanic Eruption

EVENT: Mt. Usu Eruption

DATE: August 1977

LOCATION: Hokkaido, Japan

DESCRIPTION:

In early August 1977 Mt. Usu erupted threatening small towns around it and damaged farms, orchards, and pastures on the southern and eastern sides of the mountains. While there were no casualties, thousands were evacuated, some for about a month.

REPORTS AND PUBLICATIONS:

Hirose, Hirotada

1979 Volcanic eruption and local politics in Japan. Mass Emergencies  
4: 53-62.

Hirose, Hirotada

1981 The closeness of neighborhood relations and coping with natural  
calamities: the impact of a volcano. Unpublished paper.

Hirose, Hirotada

1981 Community reconstruction and functional change following  
disaster. Unpublished paper.

AGENT: Volcanic Eruption  
EVENT: Mt. St. Helens Eruption  
DATE: May 18, lesser eruptions May 25, June 12, 1980

LOCATION: Southwest Washington, USA

DESCRIPTION:

In the first eruption, 34 were killed (plus 26 missing). Timber and summer homes were destroyed in a 150 square mile area north of the mountain. Subsequent flooding of the Cowhitz River resulting from volcanic ash destroyed major highways, bridges, and homes. The volcanic ash cloud covered much of eastern Washington and Idaho. The total losses in the state from all the eruptions approximated \$860 million. There was a federal declaration of disaster.

REPORTS AND PUBLICATIONS:

Sorensen, John H.

1980 Emergency Response to Mount St. Helens' Eruption: March 30 to April 10, 1980. Boulder, Colorado: Institute of Behavioral Science. 63 pp.

Kartez, J. D. and W. J. Kelly

1980 Emergency Planning and the Adaptive Local Response to the Mt. St. Helens Eruption. Unpublished report.

Pennebaker, James W. and Darren Newton

1980 Preliminary Report of the Psychological Impact of Mt. St. Helens. Charlottesville, Virginia: University of Virginia. 14 pp.

Dillman, D. A., M. L. Schwalbe, and J. Short

1980 Communicative Behavior and Social Impacts Following the May 18, 1980 Eruption of Mount St. Helens. Unpublished report. Pullman, Washington: Washington State University.

Greene, Marjorie, Ronald W. Perry, and Michael Lindell

1980 The March, 1980 Eruptions of Mt. St. Helens: Citizens Perceptions of Volcanic Hazard. Seattle, Washington: Battelle Human Affairs Research Center. 52 pp.

Perry, Ronald W., Marjorie Greene, and Michael Lindell

1980 Human Response to Volcanic Eruption: Mt. St. Helens, May 18, 1980. Seattle, Washington: Battelle Human Affairs Research Center. 147 pp.

Murphy, Shirley A.

1981 Coping with Stress Following a Natural Disaster: The Volcanic Eruption of Mt. St. Helens. Ph.D. dissertation (Nursing) The University of Oregon. 212 pp.



Drabek, Thomas E. et al.

- 1981 Managing Multiorganizational Emergency Responses: Emergent Search and Rescue Networks in Natural Disaster and Remote Area Settings. Boulder, Colorado: Institute of Behavioral Science, University of Colorado. 292 pp.

Warrick, Richard A. et al.

- 1981 Four Communities Under Ash. Boulder, Colorado: Institute of Behavioral Science, University of Colorado. 150 pp.

Leik, Robert A., Sheila A. Leik, Knut Ekker, and Gregory A. Gifford

- 1982 Under the Threat of Mt. St. Helens: A Study of Chronic Family Stress. Final Report. St. Paul, Minnesota: Family Study Center, University of Minnesota. 179 pp.

L-MISCELLANEOUS AND MIXED



AGENT: Miscellaneous and Mixed

EVENT: Tube Shelter Disaster

DATE: March 3, 1943

LOCATION: London, England

DESCRIPTION:

During an airraid alert, a large number of people began to arrive at a tube shelter and entered by a flight of stairs. A woman in the front line stumbled and fell; others began to fall. Within seconds, the pile of bodies was three to four feet high. 161 people were killed instantly; 12 more died in a hospital as a result of asphyxia.

REPORTS AND PUBLICATIONS:

Simpson, Keith

1943 Mass asphyxia--medical aspects of the tube shelter disaster.  
Lancet 245: 309-311.

AGENT: Miscellaneous and Mixed  
EVENT: Ship Fire, Flash Flood, 2 Apartment House Fires  
DATE: 1949-1950  
LOCATION: Canada

DESCRIPTION:

No details about the events are available.

REPORTS AND PUBLICATIONS:

Tyhurst, J. S.

1950 Individual reactions to community disaster: the natural history of psychiatric phenomena. American Journal of Psychiatry 107: 764-769.

Tyhurst, J. S.

1957 Psychological and social aspects of civilian disaster. Canadian Medical Association Journal 76: 385.

AGENT: Miscellaneous and Mixed

EVENT: Porch Collapse

DATE: June 17, 1951

LOCATION: Chicago, Illinois, USA

DESCRIPTION:

During a religious ceremony party, a porch on a second floor on which many people were partying gave away killing one person and injuring nine.

REPORTS AND PUBLICATIONS:

1954 Report on a porch collapse occurring in Chicago, Illinois, June 17, 1951. Pp. 114-132 in E. Marks, C. Fritz et al., Human Reactions in Disaster Situations, Volume 3. Unpublished report. Chicago, Illinois: National Opinion Research Center.

AGENT:       Miscellaneous and Mixed  
EVENT:       Rabies Outbreak  
DATE:        March, 1952  
LOCATION:     Eastern Pennsylvania, USA

DESCRIPTION:

      In Pennsylvania, one person died as a result of a rabies bite. Several children were also bitten, but none died. Much concern spread about the threat.

REPORTS AND PUBLICATIONS:

Diggory, James C.

1956     Some consequences of proximity to a disease threat.  
          Sociometry 19: 47-53.

AGENT: Miscellaneous and Mixed  
EVENT: Bleacher Collapse  
DATE: March 6, 1952  
LOCATION: Baltimore, Maryland, USA

DESCRIPTION:

Five to ten people were injured when a section of bleachers collapsed at the National Guard Armory during an Ice Show. No fatalities resulted.

REPORTS AND PUBLICATIONS:

Powell, J. W.

1954 An Introduction to the Natural History of Disaster.  
Baltimore, Maryland: Psychiatric Institute, University  
of Maryland. 162 pp.

AGENT: Miscellaneous and Mixed  
EVENT: Typhoid Epidemic Threat  
DATE: August, 1955  
LOCATION: Winsted, Connecticut, USA

DESCRIPTION:

In Winsted, the threat of a typhoid epidemic was reported to have resulted from the overflow of the Mad River.

REPORTS AND PUBLICATIONS:

Rayner, Jeannette F.

1955 Report of the Winsted, Connecticut Exploratory Study.  
Unpublished report. Washington, D. C.: Committee on Disaster Studies, National Academy of Sciences. 5 pp.

Rosenstock, I. M.

1956 Winsted, Connecticut--Some Hypotheses Concerning Behavior in a Disaster. Unpublished report. 13 pp.

AGENT: Miscellaneous and Mixed  
EVENT: Springhill Mine Cave-In  
DATE: October 23, 1958  
LOCATION: Springhill, Nova Scotia, Canada

DESCRIPTION:

As a result of an underground earth shift, 75 miners were killed. Eighty-one persons were rescued within 24 hours and 19 were later recovered.

REPORTS AND PUBLICATIONS:

- Beach, H. D. and Rex A. Lucas  
1960 Individual and Group Behavior in a Coal Mine Disaster.  
Washington, D. C.: National Academy of Sciences. 147 pp.
- Lucas, R. A. and H. D. Beach  
1961 Long-term effects of a coal mine disaster and industrial  
dislocation. Unpublished manuscript. Ottawa, Canada:  
Defense Research Board.
- Lucas, R. A.  
1966 The influence of kinship upon perception of an ambiguous  
stimulus. American Sociological Review 31: 227-236.
- Lucas, R. A.  
1968 Social implications of the immediacy of death. Canadian  
Review of Sociology and Anthropology 5: 1-16.
- Lucas, R. A.  
1969 Men in Crisis: A Study of a Mine Disaster. New York:  
Basic Books. 335 pp.

AGENT: Miscellaneous and Mixed  
EVENT: Food Poisoning Incident  
DATE: August 1959  
LOCATION: Gabriel (pseudonym), USA

DESCRIPTION:

While none died, 1,100 people were effected by food poisoning.

REPORTS AND PUBLICATIONS:

1960 A Study of an Epidemic of Staphylococcal Enterotoxin Food  
Poisoning. Task Surprise. Philadelphia, Pennsylvania.  
Institute for Cooperative Research.



AGENT: Miscellaneous and Mixed

EVENT: Avalanche

DATE: January 11, 1962

LOCATION: Ranrahira, Peru

DESCRIPTION:

An avalanche destroyed a town and killed about 2,000 people.

REPORTS AND PUBLICATIONS:

Bradfield, Stillman

1962 The Avalanche at Ranrahira. Unpublished manuscript.

AGENT: Miscellaneous and Mixed  
EVENT: Coal Slurry Avalanche  
DATE: October 21, 1966  
LOCATION: Aberfan/Merthyr Vale, Wales

DESCRIPTION:

An avalanche of coal slurry killed a total of 144 people and engulfed the village primary school, where it killed 116 children.

REPORTS AND PUBLICATIONS:

Miller, Joan

1974 Aberfan: A Disaster and Its Aftermath. London, England:  
Constable and Company, 207 pp.

Jones, Erastus

1975 The Aberfan story. Social and Economic Administration 9.

Williams, R. M. and C. Murray Parkes

1975 Psychosocial effects of disaster: birth rate in Aberfan.  
British Medical Journal 2: 303-304.

AGENT: Miscellaneous and Mixed  
EVENT: Erosion Threat  
DATE: March 18, 1973  
LOCATION: Essex County, Ontario, Canada

DESCRIPTION:

Essex County was threatened by lake shore erosion. There were no casualties or property losses reported.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney and J. Rick Ponting  
1973 Southern Ontario Shore Erosion Threat. Working Paper #50.  
Columbus, Ohio: The Disaster Research Center, The Ohio  
State University. 17 pp.

AGENT: Miscellaneous and Mixed  
EVENT: Erosion Threat  
DATE: March 19, 1973  
LOCATION: Toronto Area, Ontario, Canada

DESCRIPTION:

The Toronto area was threatened by lake shore erosion.  
There were no casualties or property losses reported.

REPORTS AND PUBLICATIONS:

Kueneman, Rodney and J. Rick Ponting  
1973 Southern Ontario Shore Erosion Threat. Working Paper #50.  
Columbus, Ohio: The Disaster Research Center, The Ohio  
State University. 17 pp.

AGENT: Miscellaneous and Mixed  
EVENT: Landslide  
DATE: November 30, 1977  
LOCATION: Tuve, Gothenburg, Sweden  
DESCRIPTION:

A landslide in a suburb of Gothenburg totally destroyed 65 houses, and at least 600 individuals living in approximately 200 houses were affected. Nine persons were killed and an additional 17 houses had to be permanently evacuated besides those destroyed.

REPORTS AND PUBLICATIONS:

Lundgran, Claes

1978 A Study of a Local Radio Station's Reporting of a Landslide in Gothenburg. Stockholm: Psykologiskt Forsuar. 113 pp.

Bjorklund, Birgitta

1981 Skredet i Tuve. Familjen och dess Bostadssituation. Uppsala: Department of Sociology, Uppsala University. 74 pp. (In Swedish with English abstract.)

Hultaker, Orjan

1981 Housing Patterns after a Landslide. Unpublished paper.

Syren, Sverker

1981 Organiserad Akitiritet Efter Tuveskredet. Uppsala: Department of Sociology, Uppsala University. 180 pp. (In Swedish with English abstract.)