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DISASTER STUDIES AND PLANNING:  
FINAL REPORT

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Final Report

DISASTER STUDIES AND PLANNING

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## PREFACE

From February 1972 until August 1978, there was a contract between the DCPA (formerly the Office of Civil Defense) and the Ohio State University Research Foundation acting on behalf of the Disaster Research Center (DRC). This contract has been revised and modified six times since 1972. While additional funding to the original sum granted in 1972 was given in 1973 and 1974, no new funds were allocated to the Center after some nominal funding in 1975. Although the contract has been kept in force since 1975, it has been possible to engage only in minor yearly updating of suspended work. There has been no opportunity to undertake the necessary new field research to complete initiated work, or to obtain the personnel necessary to finish analyses already started.

This final report summarizes the work done, and the various analyses undertaken by DRC during the course of this research especially in the years 1972-1975. The first chapter briefly outlines the objectives of the work undertaken, and the degree to which these objectives were attained. Chapter two summarizes the methodology used and the data obtained for each of the six objectives. In the next chapter, the research accomplishments are noted with particular emphasis on the work which had not been previously reported in documents produced by our work. Some conclusions and recommendations are contained in chapter four. An appendix provides copies of some of the field instruments used.

It is important to note that in this report, the findings and conclusions were drawn from field data gathered no later than 1974. They do not necessarily reflect the conditions and circumstances since that time or currently existent. The report should, therefore, be read with that qualification in mind.

Throughout the project, different personnel were involved in the research aspect of the work. Russell R. Dynes was co-principal investigator in the early years of the research and a faculty research associate until 1977. Research assistants included the following: Ben Aguirre, John Bardo, Sue Blanshan, Don Bobb, Paul Cass, John Fitzpatrick, Marvin Hershiser, Michael Kearney,

Rod Kueneman, G. Alexander Ross, Martin Smith, Verta Taylor, Kathleen Tierney, Jerry Waxman, Sue Wigert and Joseph Wright. All those listed must be thanked for their contributions to the research. In addition, appreciation is also given to the secretarial and office personnel who provided necessary services throughout this project. It is necessary also to acknowledge the cooperation and assistance of hundreds of officials, especially at the local community level who provided the information which was the essential data core of the work undertaken.

Last but not least, James Kerr and George Van den Berghe, our two main contacts in DCPA and the predecessor organization, OCD, must be thanked for their assistance, support, advice and general help in different ways from the start to the conclusion of the work. Their attitudes and actions made administrative details easier to bear, and contributed to the achievement of research objectives.

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## CHAPTER I

### OBJECTIVES OF THE WORK

Over the years the contract generally specified six objectives. They were the following:

1. That DRC would continue its surveillance and field studies of major natural and technological disasters, in particular looking at the responses to and planning for such disasters;
2. That DRC would study (a) the advantages of community emergency responses when direction and control was exercised from an emergency operating center, and (b) the value of systematically gathering agency logs, after-action group critiques and related documents, to see if an ideal sequence of emergency time actions and activities could be constructed from actual incidents;
3. That DRC examine the factors and conditions that facilitate or hinder the involvement of local civil defense in the planning and responses to local community emergencies and peacetime utility activities, and that DRC produce a document from such research;
4. That DRC using its prior field work data produce a document on how effective and efficient planning could actually be implemented at the community level;
5. That DRC primarily using already gathered field data analyze the problems in the information flow or communication process which affect the performance of emergency services at times of disasters;
6. That DRC examine the literature on evacuation and by conducting such field work as it could, analyze the characteristics, contexts, conditions, problems and implications of evacuation behavior.

DRC was able to undertake the necessary work in connection with objectives 1, 2 and 3. Work towards objective 4 was initiated but because of funding limitations the necessary analysis and report writing was only partially completed. Lack of funds also prevented any but the most preliminary work on objectives 5 and 6.

## CHAPTER II

### METHODS AND DATA

To fulfill objective 1, a series of field studies were undertaken. In most cases the stringent budget available required that these field studies be conducted in conjunction with other field work DRC was carrying out. In this manner, some field data which could not have otherwise been collected was obtained. Research was undertaken in the following 14 disasters:

1972 Dam Overflow, Buffalo Creek, West Virginia  
Chlorine Leak Threat, Louisville, Kentucky  
Flood, New Braunfels, Texas  
Flash Flood, Rapid City, South Dakota  
Flood, Richmond, Virginia  
Flood, Lebanon, Pennsylvania  
Flood, Wilkes Barre, Pennsylvania  
Flood, Corning, New York

1973 Great Snowstorm, Columbia, South Carolina  
Blizzard, Des Moines, Iowa  
Flood, St. Louis, Missouri  
Tornado, Jonesboro, Arkansas  
Great Fire, Chelsea, Boston, Massachusetts

There were no field studies after 1973.

The work in these field studies consisted largely of open-ended interviewing of community and organizational officials. Several hundred interviews were obtained. The interviews focused on general preparations for and responses to disaster impact. Examples of the interview guides used are found in Appendix A. Major focus was on the emergency time period of the response. In addition to interview data, documentary and statistical materials were also gathered.

For objective 2a, data from the above field studies were used as well as all relevant information in the DRC files from previously studied disasters. The specifics of the data are discussed later. A systematic examination was made of the uses and problems associated with the functioning of EOCs at the time of disasters. About three dozen disaster situations were found in which some substantial material relevant to the operation of EOCs was present.

In an effort to meet objective 2b a major attempt was made in about a dozen field studies to collect in a systematic way such items as agency logs, after-action group critiques and other documents relevant to emergency time operations. A search was also made of the non-interview material gathered by DRC in earlier studies. There were a number of serious practical problems associated with this data gathering effort. Among the difficulties we encountered were the following:

(1) Decentralization of record keeping.

Some organizations did not maintain certain records for the entire organization, but just for subunits. For example, some hospital records were only kept

by departments or floors, some highway patrol records were only kept at local supervisory levels, and some school district records were only kept at local schools. Without going to the specific subunits involved, it was impossible to obtain certain kinds of information, especially in a disaster that involved only some subunits and not all an organization's units.

(2) Informality of record keeping.

Some organizations either kept only informal records or used an informal mechanism to get internal information. For example, smaller size law enforcement agencies often did not keep formal records in regard to certain activities of the organization. Some of this type of information might have been obtained through interviewing but its validity might have been somewhat questionable unless key personnel with good memory recall would have been available.

(3) Authorization of release of records.

Some local units or subunits of larger organizations did not have the authority to release records of local operations to anyone. For instance, some local telephone offices, local highway patrol posts, and some local units of national corporations were often limited in the information they could give out. Clearance of such local data would have to have been obtained from the more distant larger organizational entity.

(4) Aggregation of data records.

Organizational data were frequently aggregated rather than individually compiled for units involved at particular times in the disaster. For example, much law enforcement data was spatial (i.e., including the disaster area in a larger region) or temporal (i.e., including disaster related days in figures compiled for a month or some other extended time period). Such information, once compiled in an aggregate way, could never be broken down into more relevant divisions for disaster research purposes.

(5) Delay in record keeping.

Some organizations waited for a periodic time (e.g., the end of the month or even a quarter) before attempting to compile certain kinds of information. In some cases, daily records, put together by a local unit, were sent to a larger or regional unit which did not assemble the data until the specific time for such record keeping. Even when such information could be obtained for research purposes, there would have been an inevitable delay.

(6) Discarding or destruction of informal records.

Some kinds of informal logs, chronologies, and minutes were generally discarded soon after the emergency period was over because the organizations involved would have no need of them. Many of the key emergency groups operating at an EOC or emergency headquarters would informally record on blackboards, memos and so forth, all kinds of data which might have been relevant to immediate organizational purposes, but would erase or destroy such information when there was a return to normal operations. Unless research personnel were on-the-scene during the height of the emergency period, the possibility of getting copies of such information was lost forever.

(7) Costs in reassembling records.

Even when records were kept, it was often costly in time, money, or effort to reassemble them later after the event or situation. For example, useful comparative data for a corresponding time period a year before an event was



sometimes stored in the files of relevant organizations such as the sheriff's department, United Appeal, the city manager's office, the local post office, the airport manager's office, etc., but was too "costly" for the organization to retrieve for research purposes. Many emergency records were relatively meaningless unless there was some base line set of data from a normal, routine time period against which they could be measured, but the organizations involved could not be expected to reassemble them for research purposes.

(8) Confidential nature of some records.

Records were classified as confidential for many reasons. In many situations, most of the private corporations involved, ranging from mass media groups to transportation companies, felt that opening a number of their records might involve loss of normal competitive advantage. Such information could not be obtained unless the organizations involved saw some advantage for themselves in releasing the documents involved.

(9) Record storage and control of records were often in different organizational units.

Persons and offices that compiled and stored records were not always the same individuals and units who had formal control of the records. There was often a very complex division of labor with regard to the compilation, storage, and control of organizational records, with ultimate access to them requiring a researcher to search for and obtain cooperation at different organizational levels from different officials. To some extent, this was a problem of ascertaining where and who in the bureaucratic structure needed to be approached to get information.

(10) Absence of certain kinds of emergency records.

Record keeping at the height of a disaster tended to be very poor in many key emergency organizations. Hospitals, for example, which receive many victim patients, simply did not record the number and kinds of cases they treated. Record forms filled out after the emergency often used estimates and guessed numerical phenomena, although this was often not indicated in the records themselves.

(11) Sensitive nature of some records.

Some organizations were very reluctant or unwilling to give internal documents to outside researchers for fear they might be used for legal purposes, were concerned that the documents might portray the organization in a bad light, or thought it would have been politically unwise to release internal documents which could be seen as containing material critical of other organizations.

The purpose of pointing out these problems is not to indicate the impossibility of obtaining documentary data under all circumstances. Rather in terms of the time and budget constraints within which DRC had to operate, not enough relevant documents containing reliable information could be obtained. Given enough time and resources, a reasonable number of documents of acceptable quality probably could have been collected. However, given DRC's operating conditions, this research effort was suspended in the hope that later additional funding and a longer time period would allow the problem to be tackled at a future date. However, that opportunity never occurred and we were never able, therefore, to obtain enough necessary data to evaluate the value of systematically gathering agency logs, after-action group critiques and related documents. In this sense, because of data gathering limitations, objective 2b was only partly achieved.

Data for objective 3 was obtained by conducting 12 systematic field studies. The communities studied were the following:

Boston, Massachusetts  
Buffalo, New York  
Louisville, Kentucky  
Lubbock, Texas  
Memphis, Tennessee  
Oklahoma City, Oklahoma  
Omaha, Nebraska  
St. Louis, Missouri  
San Diego, California  
Savannah, Georgia  
Seattle, Washington,  
Waterloo, Iowa

A special set of interview guides (reproduced in Appendix B) was used in interviewing approximately 300 officials in the different cities.

The data for objective 4 was, for the most part, the same data that had been collected for objective 3. The data, in hand, provided enough information for writing an extended draft outline on the implementation of disaster planning. Budget constraints, however, eventually prevented the expansion of the draft outline into a full, final product.

Likewise, and for the same reason, it was never possible for DRC to launch new field studies to obtain the data required for objective 5. Earlier gathered field data was used as the basis from which an interview guide could be developed. However, such a guide and the basic field research design for this part of the proposed work never passed beyond a first working draft outline.

In order to fulfill objective 6, an attempt was made to locate all relevant material on evacuation in the literature and in our files. At one time the material was screened to assess its quality and to provide some ideas on how to build the code we saw necessary for the projected later systematic analysis. This was the stage the work had reached when budgetary considerations prevented the initiation of systematic analysis.

## CHAPTER III

### RESEARCH ACCOMPLISHMENTS

There were three major research accomplishments, all of them resulting in the writing of some kind of document during the course of the work. (1) We did do a major study on the role of local civil defense in disaster planning and produced a major final publication carrying the title, The Role of Local Civil Defense in Disaster Planning. It appeared as DRC Report Series #16. This document completed objective 3 of our work and partially fulfilled objective 1. (2) We did produce an early analysis and statement on the use of local EOCs in natural disasters. The initial statement appeared as a preliminary paper under the title, Problems and Difficulties in the Use of Local EOCs in Natural Disasters. However, additional work was done after the writing of that document which is discussed later in this chapter. Both the earlier and later work were done to meet objective 2a and to fulfill part of objective 1. (3) We did develop an extended draft outline for a document on the implementation of disaster planning. While the draft was written, a final document was never produced for reasons indicated earlier. The substance of the draft as well as later work done on it is also reported below. The analysis and outline was done in connection with objective 4 as well as being part of objective 1.

These three major research accomplishments are discussed further in the following paragraphs. However, since the results of the first analysis has appeared in an easily available document, it is just summarized in this report. The other two analyses, however, are explained in considerable more detail.

#### The Role of Local Civil Defense in Disaster Planning

Since the details of the work done on this problem are reported in the 105 page publication mentioned earlier, only the highlights of the study will be summarized here. These statements refer to the situation on the American scene as of the early 1970s. It, therefore, does not take into account changes that have occurred since that time.

Intensive field studies involving over 100 in-depth interviews in 12 American cities were conducted in an effort to ascertain the conditions or factors associated with variations in the tasks, saliency and legitimacy of local civil defense organizations around the United States. All of the cities were objectively subject to at least two major natural disaster threats and half had undergone a major disaster in the last decade. Data was obtained from key community and emergency organization officials by way of a disaster probability rating scale, two intensive interview guides, and a general documentary checklist.

Among the findings were the following. While overall disaster planning by civil defense has tended to be differentiated, segmented, isolated, cyclical and spasmodic, in recent years planning has broadened to include a wide range of disaster agents, a lesser focus on nuclear attack, more concern with local community viability and increasing involvement of a greater number of organizations in community disaster plans. Currently, in almost all communities, there are multiple layers of planning with little consensus on disaster tasks, on organizational responsibility and on the scope of disaster planning, as well as confusion concerning the role of civil defense in such planning. Local civil defense directors not only differ in following a professional or a political career path, but also manifest a variety of behavioral styles in carrying out their roles.

Local civil defense agencies tend to be ambiguously viewed as to their interests, structures and functions by the general public, community influences and organizational officials. Civil defense agencies have also evolved in two different ways -- some following a traditional path with an emphasis on nuclear hazards and others concerned with a number of different hazards. High saliency seems to be related to extensive horizontal relationships, broad scope of tasks and multiple hazard concerns.

A number of factors undercut the legitimacy of civil defense organizations. These include changes in organizational purpose, perceived need for services, decline in resources, poor performance and changing saliency of the military model. Local offices which have legitimacy tend to be in localities where there are persistent threats, where civil defense is within the local governmental structure, where extensive relationships are maintained with other organizations, and where the output or product of the civil defense organization is seen as useful to other community groups.

Perhaps the best overall generalization which can be made concerning the successful involvement of civil defense organizations is that their degree of success is dependent upon their ability to provide the local community with resources which are necessary for emergency activity. These resources can be in the form of the skills and knowledge of personnel, in the form of equipment and facilities, or in the form of planning. Concentration solely on planning is not sufficient.

The conditions which are most likely to be productive of successful local civil defense involvement are as follows:

(1) that local civil defense will develop experience in handling a variety of community disasters. There are two aspects to this. First, the fact of previous involvement, in most instances, indicates that the organization has had experience in the definition of responsibility, the identification of tasks, and the practice of coordination. Second, disaster experience provides the opportunity for other community emergency organizations as well as the general public to see the utility and competence of local civil defense.

(2) that municipal government provides a structure which accepts and legitimizes the civil defense function. As we have indicated, local civil defense directors are found in different governmental units and in different "levels of importance" within these structures. This is due to the fact that there is considerable diversity in municipal administrative forms. For example, some directors are organizationally isolated from the major daily activities of a municipal government. This rather marginal position could perhaps be justified from the viewpoint of efficient municipal administration. A position which has responsibility only for those events which are both problematic and in the future is not as organizationally important for municipal administration as those offices concerned with continuous daily municipal responsibility -- e.g., the maintenance of public order, the collection of garbage, the maintenance of streets, the provision of public utilities, etc. By contrast, if the position of civil defense director is structured so that the person is involved in the daily on-going process of municipal administration, this tends to create a situation in which the function is both appreciated and utilized when emergencies do occur. Attempts to integrate function into municipal operations become very problematic during an emergency when operational demands are pressing. If this integration has already taken place through previous involvement, then the operational demands can be more easily handled.

(3) that the local civil defense director has the ability to generate significant pre-disaster relationships among those organizations which do become involved in emergency activities. In large part, this condition is more easily achieved as an extension of the previous one. If local directors are structurally integrated into municipal administration, they are more likely to develop the contacts which are necessary to develop effective coordination. In certain instances, however, local directors through their long tenure, active involvement, emergency experience, previous community contacts and/or individual abilities are able to develop a network of personalized relationships with persons in other community agencies which serve as a basis for the development of coordination in future emergencies. The development of coordination is perhaps most directly related to the importance given the civil defense position within municipal government, but in certain instances the development of these personal relationships provides a secondary basis upon which coordination can be built.

(4) that emergency-relevant resources, such as an EOC, be provided and the knowledge of the availability of these resources is widespread through the community. There are certain resources which are normally not a part of any emergency organization within a community. These resources may be considered luxuries in the sense that their infrequent use does not justify their maintenance in terms of the central organizational goals. There are other resources which are not necessary to any one organization but are significant in any type of overall community effort. Local civil defense can provide such resources as a part of the overall community effort. One specific example of relevant resources would be the development of emergency operations centers. EOCs can become the center for coordination of the complex brokerage systems which usually develop in widespread disasters. If such facilities are made available and are used by communities in actual emergency situations, they generally demonstrate their usefulness. Sometimes, however, these EOCs are seen primarily as locations for technical communications facilities and the space necessary for becoming a logical center of activities is not available. Consequently, they can become the mere location of the technical transfer of information without being utilized to guide and coordinate activity. In any case, the provision of community-relevant resources such as a fully functioning EOC is one of the important ways in which civil defense can increase its legitimacy.

These are some of the major elements which would insure the involvement of local civil defense offices in a range of emergency activities. Those well established civil defense offices have used these factors to develop their saliency and legitimacy. A move in such a direction would improve disaster planning, although there is more to effective and efficient responses in disasters as we will now discuss in connection with another part of our research.

#### The Use of Local EOCs in Disasters

We first discuss the purpose of this particular phase of our research, the methodology used to arrive at observations and conclusions, the necessary limitations and qualifications about the findings made and the implications drawn, and the outline for the rest of this particular analysis.

##### Purpose

In 1972 DRC looked at the use of certain local civil defense capabilities before, during and after natural and technological disasters in American society.

The basic question asked was how certain nuclear-related local capabilities such as shelters, communication facilities and emergency operating centers (EOCs) that were primarily created, built or developed with wartime use in mind were actually utilized in peacetime emergencies, especially large-scale community catastrophes. Our review of the last decade or so found only very isolated use of shelters, and only occasional use of the communication facilities of the local civil defense organization in disaster situations. In fact, usage in the time period covered was of such a limited nature that no report on such usages is warranted. However, as our preliminary paper indicated, EOCs have increasingly played a very important role in responses to disasters in this country. Thus, we concentrate here exclusively on EOCs which have become crucial elements in disasters in America, and which usually constitute a major contribution of local civil defense to community emergency planning and response.

Our purpose is twofold. One is to depict what, if any, are the typical patterns of structure and functions of EOCs. That is, how are EOCs organized at the time of their existence? What is actually done in them? The second purpose is to indicate what kinds of problems are associated with EOCs during times of disaster. What difficulties, internal or external, are involved in their operations?

The depiction of the structures of EOCs is somewhat difficult in the case of such a social phenomena as EOCs. Unlike such entities as police departments, hospitals, welfare agencies or civil defense offices, which have a continuing existence, regular personnel and formal lines of authority, budgets and standardized procedural rules, and so on, EOCs have at best only an occasional existence, no regular staff, very little bureaucratic framework, and so on. Yet when EOCs are activated there is some sort of social activity going on for a period of time at a particular place. In short, there is group action. Certain kinds of participants interact during certain significant periods of time at certain socially designated or labeled locations. For our purposes, therefore, the structure of EOCs can perhaps be most meaningfully thought of in terms of the space and time dimensions that affect those participating. In simpler words, we can look at structure in terms of who is involved, where they are involved and when they are involved.

The functions of EOCs are somewhat easier to depict. They are simply the tasks that are undertaken. These, of course, can vary considerably and can be preplanned or emergent. But for our purposes, the functions of EOCs can just be looked at as what is done in them when they are operative.

The focus of our analysis is primarily on problems and difficulties. Such a focus is followed because of our interest in noting implications for the improvement of disaster planning. This still remains a very major interest and purpose of this analysis. From our observations and findings, we wish to draw implications for both disaster planners and plans. The concern with problems and difficulties should not obscure the fact, however, that the concept of an EOC for disasters is an extremely valid one. In most emergencies DRC has studied, EOCs have functioned relatively well. By highlighting their negative features we are simply suggesting and indicating ways of further improving their efficiency and effectiveness in community crisis situations. In no way does such an emphasis imply that the problems with EOCs are any real argument against their numerous advantages and usefulness for disaster responses.

## Methodology

The findings on EOCs in this report are drawn from relevant data in the DRC files. Since its inception in 1963 through 1975, DRC studied about 300 different kinds of emergency situations. Of these about 225 have involved research on natural or technological disaster situations, including field studies of over 180 actual disasters. This research has provided the core of relevant information by way of intensive interviews with key community officials, reports of systematic observations by DRC staff personnel in the field and extensive document collection. Of particular value for this kind of information has been those DRC field studies (several dozen in number) where EOCs were the focus of direct research.

An initial analytical problem was the matter of the identification of EOCs. While the term in the last several years has achieved widespread acceptance and usage, it has not yet become part of the standard and official vocabulary of all governmental agencies. Prior to 1970 the term was seldom used by anyone. However, an analysis of the data we examined indicated that in most cases other labels such as the "control center," "the disaster headquarters," "the command post," etc., were identical to that which elsewhere was called an EOC. We have, therefore, treated all such phenomena as instances of EOCs even though they did not carry the specific label of an EOC. The discriminatory criterion used in each case that did not bear an EOC label was whether the structure and/or functions carried out by the group were similar to that typically found in a self-identified EOC group; if the answer was yes, it was analyzed as EOC phenomena.

All the relevant EOC material was read, and in the individual disaster events where enough material was available, a rough case study was put together about the event. The material was read for answers to eight general questions. These were the following:

- (1) who participated in EOC activities and in particular what organizations were represented;
- (2) what was done in the EOC with a distinction being made between those activities that were consciously recognized and those that were done implicitly;
- (3) where the EOC activities were carried out taking into account the possibility of multiple locations or changes in location;
- (4) when activities were carried on including times of activation and times of closure;
- (5) how the EOC activities were carried out with an effort to distinguish the kinds of equipment, facilities, resources, etc. being used and/or supplied by different sources;
- (6) why EOC activities were done with emphasis on whether or not actions followed from plans or other reasons;
- (7) which problems in EOC operations were consciously recognized; and
- (8) did any overall point run through each specific case.

## Limitations

There are at least five kinds of limitations or qualifications that need to be noted. For one, we consider the operations of EOCs only in disaster situations. By disaster we mean the actual occurrence or the threat of some disaster agent either naturally or technologically dangerous to life and/or property. Under natural disaster would be such agents as tornadoes, floods, earthquakes, massive blizzards, hurricanes, etc.; under technological would be fires, explosions, toxic gas leaks, power system disruptions, etc. No consideration is given in this analysis to the use of EOCs for other than disaster purposes. They are used, of course, for simulation with respect to nuclear attack, and in some jurisdictions, were used in connection with civil disturbances. Such usages are outside the scope of this analysis.

Furthermore, our analysis is confined only to EOCs organized to respond to relatively localized disasters, that is at the city or community level. Such EOCs may involve participants from county, state, regional or national agencies and groups as well as local officials, but they are oriented to a relatively localized emergency situation. We will not discuss, because we have almost no data on them, those organized for larger-scale disasters, for example, a state level EOC to deal with widespread fires. Nor is there any analysis of activities solely within given types of organizations since such matters are discussed in detail in other DRC reports.

It should also be noted that there is considerable variation in even pre-planned EOCs across the country. At least three factors are associated with such variations. As implied earlier, pre-planned EOCs have become prominent features on the American scene, but there are substantial differences in their historical rate of development of growth depending in part on the disaster vulnerability of the area, the initiative of the local civil defense office and prior disaster experience of the community involved. Consequently, some of our comments may not be totally applicable to any given EOC. Our intent in the following pages is to depict the modal, the most frequent pattern insofar as the structure and function of local EOCs are concerned as well as their problems at times of disasters. In presenting the typical picture there may be considerable deviation from what could be found in any specific case. The account we set forth, therefore, is about EOCs, not an EOC.

The degree of presence of different patterns of structure, functions and problems is sometimes characterized as being relatively frequent, relatively rare, or words to those effects. However, no attempt at quantification of the data is made. The full body of data used in this analysis was gathered in a variety of ways for different kinds of research objectives. Impressions of different frequencies of occurrences can be garnered from such data. But only a very misleading picture of the concreteness and comparability of the data would be conveyed by using any kind of frequency counts, percentages, or other numerical computations.

Specific examples and illustrations are used throughout the analysis. All instances are taken from actual cases in the DRC files. However, following standard DRC policy, no person or specific organization is ever named or otherwise identified. In a very few cases unimportant details have been omitted or modified to preserve the anonymity of the specific officials or groups being discussed.



We now discuss the structural aspects of EOCs and the problems associated with them. The first section examines the matter of the location of EOCs, both those that are pre-planned and those that emerge at times of disasters. In the section that follows we discuss when EOCs are operative; primarily when they are activated, but some attention is also given to the duration of their active existence and the matter of their closing down after an emergency. The following section considers who is involved in EOCs and looks at how participants get involved. We conclude with a brief look at the functions or tasks carried out by EOCs. This discussion is less extensive than intended because we were never able to examine the functions to the same degree as we were able to study the structural aspects of EOCs.

#### Location

There may be multiple EOCs in a disaster. This most frequently happens when there has been no pre-planning for them although multiple EOCs may sometimes be planned for too. And it is also not unknown to have several EOCs, one planned, the others not. Different conditions and consequences are also associated with these different possibilities.

When there has been no pre-planning, one of two things is very likely to happen. Multiple EOCs dealing with a limited range of problems involving participants from only a few groups may be established all around the disaster area. The greatest number encountered by DRC in one disaster was seven. Multiple EOCs make for maximum confusion, lack of coordination, duplication and otherwise as poor an overall organizational response as possible. Of course, pre-planning may lead to one EOC, many, or none ever being established at all. This can happen but usually only in rather small-scale disasters since the demands in a large-scale catastrophe eventually force the emergence of something equivalent to an EOC or EOCs whether or not they are labeled or recognized as such. Their functions get carried out even if the structure never quite develops.

Some disaster plans, especially in large metropolitan areas, call for several EOCs in different places, although different functions are supposed to be carried out in each location. In one case studied by DRC, for instance, an EOC was set up to deal with operational problems in or near the disaster site, and another EOC located in the central police headquarters concerned itself with policy questions and overall supervision of the disaster. As we shall discuss later, there is some logic to having two EOCs, one dealing with operations, and the other with policy matters. However, there are at least three problems that develop with the existence of two different locations for EOCs. Unless there is very careful planning, the maximum exchange of information necessary between the two centers will not occur, and almost inevitably there are some lags or delays in communication between them. Other persons having business with an EOC and often unaware of their planned nature and division of labor, are frequently confused, regarding which one they should deal with, notify or otherwise contact. Finally, there is reason to believe that a functional division of EOCs into two separate locations may operate best when there is a clear cut, focalized disaster site or point of impact, and is less effective in a very diffuse type of disaster situation. Furthermore, as will also be discussed later, EOCs have multiple functions (not just two), and a locational separation of these functions is not always possible or advisable.

Even when an EOC has been pre-planned, this does not preclude the emergence

of others. For example, in one threat of disaster studied by DRC, the pre-planned EOC was opened by local civil defense as the community plans called for, but two others were also created without any prior planning as the emergency developed. An operational one was set up near the site of the disaster agent, and another one with representatives from mostly extra-community agencies and dealing with coordination and policy matters was established with temporary quarters in a federal building. Mixtures of planned and emergent EOCs tend to have the disadvantages of both kinds and seem to occur where the disaster planning has not adequately taken into account the range of organizations, especially extra-community ones, that are likely to be involved in a major disaster.

Although as just indicated, multiple EOCs in different locations do occur in a substantial minority of cases, only one EOC is usually operative in the majority of disaster situations. In recent times, this is usually an EOC that has been pre-planned to be opened in a particular location at the time of an emergency. An EOC in an unplanned location results from the lack of prior planning or an inability to use the planned location.

#### Preplanned Locations

##### Geographical location

Preplanned EOCs studied by DRC tended to be located in downtown areas near city hall, if not in it, or other local governmental offices, and very close to, if not an actual physical part of, the organization responsible for the EOC, usually but not always the local civil defense office. This geographical location often seemed to be chosen more for the convenience of everyday contacts and activities of the organization responsible for the EOC than for other considerations. Relatively few locations for EOCs appeared to be placed primarily on the basis of their possible operations during an emergency period. In such cases, therefore, their vulnerability to certain kinds of disaster agents is overlooked. Thus, DRC has encountered at least three cases where the preplanned EOC could not be used or had to be abandoned in a disaster because flood waters inundated the geographic area involved. The probability of such flooding was information that could have easily been learned from an examination of the flood plain maps available from the Corps of Engineers or other government agencies.

In principle, there does not seem to be any major overriding reason why the specific location of an EOC has to be in the same locality as the major office headquarters of the organization that is responsible for the EOC. In actuality, three factors seem to account for the fact they are often in close geographic proximity if not actually in the same building. Budgetary or financial considerations appear to be important in many cases apparently because two widely separated locations involve greater costs (e.g., for travel) and imply in a bureaucratic world a certain degree of "empire building". In smaller communities, too, an EOC distant from the local civil defense office, for example, is simply totally at variance with the operations of almost all other emergency organizations where, for example, fire and police departments may not only be highly centralized in one place but also share certain facilities. Then also in some cases, community disaster planning is on such a piece-meal basis, so unsystematic and so discontinuous, that many problems are just not recognized or thought about with regard to this and many other matters.

## Social Visibility

In a surprising number of communities studied by DRC where a pre-planned EOC exists, community agencies and groups and their key officials are often not conscious or aware of it. The EOC is frequently socially invisible, with many persons unable to indicate where it is or would be physically located at a time of disaster. There might be some knowledge, because of disaster plans, that there would be an EOC, but this often is the sum total of information known. As one key organizational official said in a DRC interview, "I know the disaster plan calls for an EOC, and I know we have the facilities for one around here somewhere, but I can't honestly tell you where it is, although I would guess it would be in this building somewhere. If we have a disaster, I'm sure we'll find it."

This lack of visual saliency of EOCs is sometimes in part a result of the kind of physical installation in which the EOC is located, a point we discuss just below. But perhaps more important is a failure by whoever is responsible for the EOC to run exercises or disaster simulations where the EOC is actually manned and physically used as it might be during an actual emergency. Officials never learn where the EOC is or is to be located. It does not acquire the social visibility it should have. Surprising in fact is how few written disaster plans available to DRC clearly specify and highlight the exact location of the EOC. Sometimes its location is only indicated in a mass of details in a text, or a lay-out of the EOC is carefully diagrammed with little indication as to where the installation as a whole is located.

## Physical Installation

EOCs are housed in a tremendous range of places with varying kinds of equipment. At one extreme are pre-planned EOCs in huge underground bunkers equipped with elaborate monitoring and communication systems, working rooms for every conceivable emergency agency that might be involved, living quarters suitable for extensive durations of time, etc. At the other extreme are EOCs whose total facilities will be the conversion of the everyday desk and phone in the room of the local civil defense director into emergency use. There is, of course, some relationship between the size of the community and the complexity of the pre-planned EOC in such areas, but the correlation is only a weak one and far from perfect. Some small communities have very elaborate EOCs; some metropolitan areas have only nominal stand-by EOCs. There are situations, of course, although relatively rare, where the community has no formal designated pre-planned EOC, but where the physical installation and equipment available and intended to be used far exceeds what is formally labeled an EOC in another community of comparable size.

However, there are some common elements found in almost all physical installations defined as EOCs. In the vast majority of cases there is either a bank of phones, or the possibility of installing extra phones. Some kind of radio equipment is almost inevitably present. There are usually places planned for representatives of different agencies to be located in the EOC during an emergency. Map display boards and the like are also common equipment. Relatively rare is the physical layout of the items just noted with much attention to the kind of pedestrian traffic and noise level that would prevail during an actual emergency. Even when not in use, stand-by EOCs often seem crowded and cramped.

## Relocated Quarters

It is the very rare disaster plan in American communities that considers alternative possibilities in the case that the pre-planned EOC cannot be used in the intended location. Ever rarer are plans attempting to indicate options if a pre-planned EOC that has become operative has to be moved or relocated. Yet, the necessary relocation of EOCs is hardly unknown in disasters. In one well-known case studied by DRC, the EOC being used by the local civil defense in a flood situation had to be relocated three different times as the flood waters rose. While figures based on solid data are all but impossible to obtain, DRC has developed the impression that in perhaps as many as a fifth of all disasters, the EOC was moved or should have been moved given the problems that developed at the site of the original EOC. In some cases where a relocation would have been desirable, the absence of any pre-planning for a secondary or stand-by location, all but precluded a move.

Since the organizations responsible in American communities have difficulties enough establishing and equipping an initial EOC, it is understandable why the notion of a stand-by or secondary EOC has very seldom been implemented. Less understandable is why the possibility is not envisioned at all in disaster planning or in the thinking of emergency planners. Interviews conducted by DRC with emergency organizational personnel have seldom uncovered much awareness of this potential problem.

That the EOC itself might be vulnerable to disaster impact (and in many cases this would be possible) is also another possibility rarely envisioned. The thinking here parallels much disaster planning in hospitals. Most hospital disaster plans detail how the hospital is to respond to an impact outside itself. The double disaster, where the hospital itself would be hit as well as the surrounding area, is seldom considered. So it is with EOCs; the double disaster phenomenon is not addressed. It just is not thought about, much less planned for, in the typical American community.

## Emergent Locations

As might be anticipated, there is even more heterogeneity in emergent as over against pre-planned EOCs. At first glance, in fact, each one seems distinctly different from other and from pre-planned EOCs. However, close examination shows that since they carry out roughly the same kind of functions, emergent ones will develop roughly the same kind of structures as those that have been pre-planned. The whole activity will of course usually be quite confused and disorderly, and marked by relatively little efficiency, but someplace will become the location of the EOC. It will attain a degree of social visibility, and certain kinds of physical installations will be used more often than not. Thus, if the disaster situation is one of an emergent as over against a pre-planned EOC, there will be certain similarities.

## Geographic Location

If there is any pattern to the geographical location of emergent EOCs as over against pre-planned EOCs, it is that they are likely to be in one of two localities. If the disaster is fairly extensive and the community is relatively large the EOC that emerges is almost inevitably in the downtown area around the complex of local government buildings. A relatively focused disaster in a relatively small city will produce a somewhat different pattern. The emergent EOC

is likely to be fairly close to the major point of disaster impact. This is partly dictated by the fact that an emergent EOC is likely to have primarily operational functions, at least initially, more than most other functions. That being the case, it is not surprising that such EOCs should be set up around the disaster site wherever that may be.

### Social Visibility

Emergent EOCs will usually not be indicated by signs or other identifications early in the emergency period. They are, therefore, not visually salient either to the general public, key emergency organizations, or personnel having business with them. This means that there is often considerable milling around by people hunting for it who have become aware that some kind of center of activities exists. Often considerable time and effort is wasted in the trial and error actions that have to be used to locate the EOC, with obvious implications for speed of decision making and general disaster response.

### Physical Installation

The physical installation of an emergent EOC depends on a lot of factors, but the probability is that it will be located in one of three kinds of quarters. Some empty store or office space may be requisitioned, usually in a very informal way. A tent may be erected or some sort of mobile unit, such as a trailer, may be converted into use for an EOC operation. Or some room or rooms in the buildings of one of the emergency organizations such as civil defense, the police or fire departments, or the mayor's office will be taken over provided it does not interfere with other high priority activities going on as would be the case in the instance of a radio dispatching room of the police department. Schools, armories, large meeting halls and other facilities which otherwise appear suitable candidates for an emergent EOC are very seldom used. In part, this may be influenced by the fact that there is a tendency to locate an EOC where there are numerous phones handy, unless it is thought the EOC will be needed for only a very short period of time, say a few hours, to handle certain on-the-disaster-site operational problems which might be processed through radios and face-to-face meetings.

### Duration

There is considerable variation in when EOCs are activated, the extent of their operations when they are established, and when they are closed down. Even in very well developed community disaster plans there is often some lack of clarity surrounding the initiation, scale of operations, and closure of local EOCs. Greatest attention is paid in plans to the activation of EOCs, relatively little to their scale of operation, and almost none to their closing down. When EOCs are emergent, there is, of course, even greater variability in patterns, although as in the case of the location of EOCs, there are patterns in emergent situations although they are not as clear-cut as pre-planned ones.

### Activation

Although EOCs are generally established after major disasters, this is not universally the case. In one instance studied by DRC, although the statewide emergency plan called for an EOC in the kind of local disaster that did occur, the governor of the state chose to ignore the plan or activate an EOC. Three different and separate clusters of organized response eventually developed in

the situation, although none ever grew into clear-cut EOC form, and no overall EOC ever emerged. In another situation studied by DRC, the officials involved felt that following their normal emergency procedures was adequate enough for the situation facing them, and made no attempt to develop an EOC. Neither their emergency operating procedures nor a general disaster plan called for a pre-planned EOC. In this case too, overall coordination of the disaster response suffered somewhat. In still two other situations studied by DRC, however, EOCs were not opened even though available, but in these cases -- semi-disasters at best -- there was no indication of any problems because of a failure to take the indicated action. Nevertheless, the possible activation of the EOCs to give greater legitimacy and saliency to local civil defense was a possibility that was apparently not given much thought.

There have been cases where EOCs have sometimes not been established until the emergency period in the community was almost over. This has become an increasingly rare pattern in recent years in American communities. These delays have usually been the result of some awareness by some officials that such a center of operation should be set up along with a lack of knowledge of how to proceed to do so. In one sense what has happened in these situations is that a particular pattern of behavior is followed without actually understanding what the substance of the pattern involves. It is rather unusual to find such extensive delays in the activation of an EOC in a community where there is a well rehearsed and widely understood disaster plan.

However, while pre-planned EOCs are almost certain to be activated in the vast majority of cases of actual disasters, they are not as likely to be opened up in situations of threat only. That is, in situations with warning time for a potential disaster, EOCs are not automatically activated. A number of different factors appear to be operative in such situations affecting the considerable variability in response. Perceived certainty of the threat becoming an actuality strongly influences the likelihood of the activation of the EOC. Prior rehearsals or simulations of community disaster plans also are influential in the same direction. Traditional inter-organizational conflicts or bureaucratic disputes among key emergency organizations tend to discourage the opening of even a pre-planned EOC. So does the presence of a powerful or dominant mayor or city manager used to making all key decisions. It appears too that the less the community has had experience with prior disasters, the less likely an EOC will be activated upon the indication of a threat to the area only. To some extent, too, the clarity of the warning and the clearness of the probability of the threat in the warning message or messages issued by the National Weather Service or whatever relevant organization is involved, will affect the likelihood of an EOC being activated. Given these and other operative factors, it is clear why the sheer presence of an EOC facility will not automatically bring about its activation because of a potential rather than actual danger to the community. Furthermore, as will be discussed below, even if an EOC is activated, the minimum personnel from different organizations crucial to manning it effectively, will not necessarily appear at the installation.

Whose responsibility it is to activate pre-planned EOCs is not always clear in disaster plans. In some instances there are well laid out criteria adjusted for local conditions on when an EOC is to be put into operation. In other cases while there may not be clear-cut criteria, certain key emergency organization officials are specifically given the responsibility for making the decision. But in many instances neither operative criteria nor responsible

officials are specifically designated in existing disaster plans. In those cases, the timing of the activation of the pre-planned EOC seems to depend on almost accidental factors, with often a consequent erratic mobilization phase and relative inefficiency in initial activities. In several disasters studied by DRC the lack of clarity over specific responsibility for activating the existing EOCs led several organizations to be quite late in getting their pre-designated representatives to the installation with resulting poor coordination of the overall disaster response in the community.

#### Scale of Operations

Initial activation of a pre-planned EOC before a disaster usually involves only a partial mobilization of personnel and organizations, with full mobilization occurring only when the threat becomes more immediate. It is rather standard operating procedure to man an activated EOC initially with only a small core of persons. Only the most key emergency organizations are typically represented and usually by second line officials. The assumption is made that such a scale of operations is all that is necessary in most cases. While this is probably true, DRC has encountered situations where major policy decisions were considerably delayed because of the absence of some organization and/or the limited policy-making powers of the agency officials present at the EOC. Also there is always the possibility that the disaster threat may escalate towards an actual impact far more quickly than has been predicted or forecast, which could catch an EOC with an operation and personnel below that actually needed. While many disaster plans spell out phases or steps in escalation of mobilization, few seem to address themselves to the problems that might be involved by the need for a sudden, unexpected and very accelerated mobilization in the middle of a step-by-step mobilization movement.

It has happened more than once that while all or most key local community emergency organizations were informed of the activation of an EOC, this word was never received by some extra-community organizations. There appears to be persistent difficulties in informing groups from outside the community of the activation and operation of a local EOC. Part of the difficulty stems from the fact that even well designed community disaster plans often do not adequately take into account that extra-local groups will have to be integrated into the overall disaster response. Another problem, an almost inherent one, is that many agencies from outside a community are unlikely to mobilize unless there is an actual disaster or a very high probability of such. Thus, a local EOC may be activated and start to operate with almost no participation from certain extra-community groups that may eventually come to play major roles in the disaster response.

What most disaster plans do not handle at all well is the strong possibility that during a disaster different organizations will be differentially involved insofar as EOC usage is concerned. That is, the kind of use any given organization will have for an EOC varies through time as the demands of the disaster shift and the scale of operations change. For example, prior to actual impact, agencies and groups involved in rehabilitative or restorative tasks will have relatively little to do. On the other hand, organizations with responsibilities and tasks associated with warnings, protective and preventive activities, and immediate emergency actions will be frequently operating at maximum capacity. The scale of operations for almost any organization involved in a disaster will fluctuate from pre-impact to impact through post-impact. These changes have

implications as to where the representatives of the organization should be located in the EOC at different times and how much space they should have in which to work. Field teams from DRC have noted at different times in different disasters that the largest parts of an EOC may be inactive and that action may be heavily concentrated around only a few desks or in one out-of-the-way, inconveniently located corner. In most disaster plans little attention seems to be given to designing the layout of the pre-planned EOC so as to take into account the probable shifts in scale of operations of most of the organizations represented in the EOC during the course of the disaster.

Problems in scale of operations are, of course, magnified when there are emergent rather than pre-planned EOCs. In some cases of the former, there have been instances when an organization has not been able to locate in the established EOC because the facilities being used could not accommodate any more people. This merely highlights the necessity of thinking through what is likely to be the maximum scale of operation for an EOC at any time, and planning accordingly. Similarly, there is a need to plan for the shifting needs for EOC space and usage by different organizations through time. It might be, for example, that the location allocated to organizations involved in warning prior to impact ought to be planned to be turned over to relief agencies after there has been impact.

#### Closure

It is the extremely rare disaster plan that specifies how and when an EOC should be closed down. The question in most instances is simply not addressed. There seems to be some sort of assumption that there will be a spontaneous process of phasing out an EOC. No one is ever given the responsibility of insuring an orderly close-down. Usually organizations withdraw, on their own initiative, the representatives they may have in an EOC, rarely informing others of the move. In the later stages of a disaster, DRC field teams frequently encounter considerable lack of knowledge about when certain groups have ceased operating in the EOC, with inquiries about their whereabouts being the first awareness by the remaining agencies that these other groups have left.

This lack of attention to closure problems is as true of situations where there have been very carefully planned activations of EOCs as well as where the EOC has simply emerged without any planning. The lack of attention paid to closure problems is usually explained in one of two ways. The closing down of an EOC is not seen to be as much of an emergency as the opening up of an EOC. The assumption here seems to be that pre-impact and impact disaster demands require more immediate response and actions than post-impact demands. A delay in dealing with the latter is not viewed as being as serious as delays in the former. This is probably true in many cases, but most problems, whether of victims, organizations or communities, come after the impact of a disaster and not before its occurrence. It also seems to be at least implicitly argued that the coordination of an orderly closing down of an EOC operation would be an extremely complex undertaking. This is possible, but in principle it is difficult to see why it would be any more complex than many other kinds of problems in disasters.

#### Participation

It is very difficult to discuss who participates in EOCs for a variety of



reasons, although certain patterns can be discerned if enough field observations are made as DRC has done. Even in pre-planned EOCs there is likely to be a great discrepancy between who the plan specifies should be present and who actually will be at the EOC at some time or another. Furthermore, there is considerable variation in the number of participants at given stages of a disaster situation, with practically no one present for all or almost all of the time. Finally, the degree of participation or the degree of involvement in EOCs can and does range from accidental, non-active spectators to planned, active key officials, and every variant of role possible in between. Nevertheless, some patterns of involvement and associated problems can be depicted as we do below. For purposes of discussion, we look at questions of numbers, representativeness and internal management.

#### Numbers

Probably the safest general statement that can be made about EOCs is that whether planned or not, they tend to have many people in them. In most cases, in relation to space available, they clearly are overcrowded. At times of peak activities, the number of people milling around and in an EOC can be massive, making movement difficult, preventing an easy traffic flow, and resulting in a very high noise level, conveying an impression of considerable confusion. It is clear in some cases that the sheer number of people present is a hindrance to effective and efficient operations. In a few such instances, DRC has discovered that a small group of key officials, perhaps five or six of them, will start to meet separately in a different nearby location, when important policy decisions have to be made. They withdraw to such a secondary location simply to get away from the crush of people that may be present at the EOC. This has the advantage of allowing certain necessary decisions to be made, but often results in other EOC participants not being knowledgeable of or as quickly aware of the decisions as perhaps they should be given their responsibilities and organizational affiliation.

The basic reason for the general overcrowded situation is that most EOCs tend to have an open door policy, that is, anyone can literally walk in through the main entrance, with someone given responsibility for directing persons who arrive, answering general inquiries or otherwise controlling access into the EOC. This procedure works relatively well in small scale disasters and at slack times during the emergency period. It is less effective in large scale disasters and when emergency activities are at their peak since the check point either becomes a serious bottleneck for ongoing actions or ends up being circumvented. In a few rather rare cases DRC has found entry into some EOCs completely barred to all but previously designated authorized personnel. This does reduce physical crowding, but also causes more radio and telephone communications into the EOC, occasional delays in dealing with unexpected problems, and resentment on the part of some officials and citizens who believe they should have the right to enter the community EOC.

#### Representatives

Local community organizations responsible for emerging activities are usually represented at EOCs. However, there are exceptions to this as pointed out below. Hospitals are seldom either directly or indirectly represented in EOC activities. Reflecting a somewhat general tendency for hospital-medical disaster planning to be separated from or independent of overall community or emergency organization disaster planning, it happens frequently that local hospitals have no representatives

at a local EOC operation. Also absent from EOCs, though considerably more rarely, are representatives from independent enclaves (e.g., a township, incorporated village or other political entity) embedded in or surrounded by the larger city which has the EOC operation. In several cases known to DRC there was a lack of prior planning or emergent decisions to bring representatives of the organizations in the smaller governmental entities into the EOC operation even though the emergency or disaster at least partly spilled over the larger community boundaries into the smaller political enclaves. The absence of hospital or other representatives leads to less comprehensive feedback of information to the EOC than is desirable and obviously hinders general overall coordination.

Non-local community organizations (e.g., county, state, regional or national groups) are not always represented at local EOCs. In fact, it is the rare situation when any such representative is present in the early stages of a disaster, although some may be present in situations of long threat, particularly those requiring expertise personnel or specialized equipment as in dealing with toxic threats or possible flooding from massive snowfalls. A number of factors seem to account for the lack of representation from non-local organizations in local EOCs. As noted earlier, even in pre-planned situations there is a tendency to leave out other than local groups in the planning process. Some non-local groups since they often are formally linked or are subparts of existing networks of state, regional or national units are inclined to try to operate within their own usual and familiar channels of communication and authority. Finally, except in instances of long developing threats as alluded to above, non-local groups tend to get involved only in the latter stages of a disaster when local EOCs have already been activated, manned and in some cases fairly well physically occupied. In a disaster where the decisions and actions of non-local organizations are important, the absence of their representatives from the local EOC can result in underestimating the help that is potentially and actually available, can lead to overlooking crucial needs, and may result in misunderstandings eventuating in strained relationships if not conflict between the local community and larger organizational and political entities.

A few private groups and organizations involved in disaster-related activities, are sometimes hesitant to send representatives to EOCs because of their perceived public or perhaps even more specifically governmental character. Thus, some church organizations, private welfare groups and the like, who do not wish to be identified in any way with a governmental operation are often unwilling to have representation at a local EOC. In part the reluctance seems to stem from being mis-identified as simply another government agency. In part, there seems to be the view that an EOC could lead to control of activities; the private groups are willing to cooperate but anything seen as threatening their complete independence is approached very warily. When EOCs, as indicated in the first chapter of this report, are labeled "control" centers or "command" posts the disliked imagery is reinforced.

The general pattern is for representatives from official emergency organizations to be second or third level staff personnel, that is from the middle range of the organization. Their policy and decision-making powers, therefore, are usually limited. Whether this creates problems or difficulties depends rather heavily on the functions being carried out at the EOC. (These functions are discussed in detail in the next chapter.) If the prime tasks are information and operational matters, middle level organizational personnel

can serve the purpose. However, if policy questions or major decisions are involved, such officials usually have neither the authority nor, in most cases, the overall organizational knowledge to take such steps. Also, there is a tendency for second or third level staff persons to be accustomed to playing a bureaucratic role and to follow rules and regulations relatively strictly. But tasks at EOCs sometime require considerable imagination in seeking new ways of doing things, and a willingness to assume the initiative as disaster demands develop. Therefore, middle level bureaucrats accustomed to following only traditional paths and almost always reacting to, rather than initiating, actions are not always the best officials to represent an organization at a local EOC.

Operational and official heads of key emergency organizations frequently "drop in" but their lack of continuous attendance occasionally leads to inconsistent decisions and policies emanating from EOCs. For understandable reasons important community and organizational officials are often very mobile and on the move during a disaster. Most seem to make an effort to come by a pre-planned or emergent EOC if they are aware of its existence. However, often all the relevant key officials are not present in the EOC at the same time, and problems may result. In particular, there may be a lack of consistency in what is done. One official not being fully aware of the actions of another may take steps which might not be totally in harmony with prior actions. In principle, this should not occur in a well-planned and well-run EOC as all relevant and up-to-date information would be available. But in actual fact, because of the various factors we have been discussing in this chapter, such information is not always available, or if available, not always presented to key officials.

#### Internal Management

The internal management of EOCs is frequently a problem. At least four different conditions contribute to this difficulty. For one, it is quite often unclear to most participants who, if anyone, is in charge of the EOC itself. In actual fact, even in pre-planned EOCs, the plans frequently fail to make clear what official has responsibility for space and equipment allocation and other internal management tasks even though the plans may clearly specify other kinds of responsibilities such as who should attempt overall coordination and so on. Almost never is there any visible sign in an EOC indicating who is in charge of housekeeping and similar tasks. In this respect, most EOCs seem quite leaderless, although eventually as problems of management develop, some person, frequently a second line civil defense official, will informally take over the internal management role. In emergent EOCs, the problem of responsibility for internal management usually never gets satisfactorily solved and contributes substantially to the general disorganization in such kinds of EOCs.

Another contributing factor to internal management problems is the typical presence in EOCs, at the height of emergencies, of many persons who are simply volunteers or at least are not official members of any formal organization as such. Consequently, they are not responsible to anyone or under any organizational authority. They almost have to be dealt with on an individual basis. There are times when volunteers perform useful and important services. But they can easily become a disorganizing element because of the nature of their motivation, their lack of clear-cut group identification, and the absence of definite sanctions that could be imposed upon them. Their management can be one of the most difficult of all problems in an EOC.

Liaison personnel from less familiar local organizations, in particular, are not always recognized or even known to be present in EOCs. Field teams from DRC have run across situations where the presence of representatives of certain organizations was unknown to other agency representatives in the EOC. In isolated cases, efforts have been made to reach a particular organization by phone or radio when the organizational representative is actually present in the EOC. A more important problem is that lack of knowledge of what personnel are on the scene can lead to ignoring the availability of certain resources or services that could be used in the disaster. Frequently compounding the difficulty, is that personnel from these organizations are likely to be persons from groups who have the least familiarity with disaster experiences and planning and are, thus, unacquainted with how to go about becoming useful in the situation.

Finally, even in pre-planned EOCs, the degree of noise, crowding, and moving around that will prevail at the time of an actual emergency has been greatly underestimated. Even when there have been pre-emergency simulations or dry run exercises, the actual physical situation has seldom been reproduced. For example, in an actual EOC operation there will be considerable movement of people in and out of the EOC, a considerable number of persons simply milling around and many individuals who will not be or stay at their assigned desks or locations. Officials who derive their image of an EOC operation from a simulation where a limited number of people are present, where the activity is orderly, and where personnel are at and remain at assigned stations, sometimes seem overwhelmed by the bustle, disorder and confusion of an actual operation. The actual situation appears to be so different from the anticipated situation that some officials with management responsibilities seem incapable of rising to the actual demands of the situation. Their expectations have been so different that they are handicapped in responding and adjusting to the actual situation facing them, so that little internal management is undertaken and overall supervision is lacking. In one or two cases encountered by DRC, the local officials supposedly responsible for the overall operation of the EOC, in the face of totally different circumstances than they had visualized, all but abandoned efforts at managing the situation.

#### General Tasks

There is often lack of clarity and consensus, even in pre-planned local EOCs on the major functions of EOCs and the specific tasks to be undertaken therein. While this might seem obvious in the case of emergent EOCs, it may appear surprising in the instance of planned ones. However, emergency planning can and does vary considerably in specificity and detail. To cite one real case, a plan which states that the EOC is where "major decisions are to be taken: and that has almost nothing else about an EOC clearly lacks preciseness and insures that differences will appear in tasks undertaken in the course of an actual disaster. Furthermore, community and organizational plans tend to be revised piecemeal, a section at a time at best. One consequence of this is that inconsistent aspects about EOCs or any other element can be easily incorporated into the planning unless great care is taken to iron out discrepancies with non-revised parts of a plan. Whatever the reasons, many otherwise good disaster plans fail to clearly spell out what should be done at an EOC, apparently assuming that the tasks are fairly self-evident.

At least six different major tasks are typically carried on at EOCs. They are the following: coordination, policy-making, operations, information gathering, dispersal of public information, and hosting visitors.

## Coordination

Coordination tasks (i.e., those directed at relating organizations to one another effectively, and relating capabilities of organizations to disaster demands) are usually handled initially in a relatively poor manner due to a lack of adequate information inputs. However, if good pre-disaster plans exist, coordination usually tends to become better during the course of the emergency period. If there are no plans, there will be little meshing of organizational activities, although sooner or later sheer necessity forces the emergence in some ad hoc fashion of some rough kind of coordinated activity.

The very concept of coordination is interpreted in a wide variety of ways ranging from the formalizing of overall community priorities on emergency problems to the act of an organization announcing to others what it has already done. Clearly if there is little prior consensus on what coordination is, implementation of a disaster plan becomes very difficult. In too many instances, it has taken a disaster to show that there had not really been agreement on what was understood by coordination on the part of relevant agencies.

The role of chief coordinator at EOCs is far from standardized either as to whom should take the role or how the role is to be played. Generally, the role is given to an official usually associated with civil defense in some way, whose ability to exercise influence often depends more on pre-emergency social ties than on formal or planned official relationships. There can be coordination without an overall coordinator, but if there are unplanned things occurring, the overall coordination will quickly deteriorate or even totally collapse.

There sometimes develops at EOCs a high degree of coordination within clusters of organizations working on the same or similar disaster tasks or problems, a coordination not extended to groups outside of the given cluster. This may not create any great difficulties if the different clusters are not involved in the same task or trying to use limited resources. But if there is duplication or overlap of effort or if there are not enough resources to go around, what ensues can become a simple power struggle between different clusters of organizations represented in the EOC.

## Policy-making

Policy-making (i.e., those tasks involving decision making regarding the overall community response) often is given precedence over coordination even to the point of organizational officials looking for matters on which to make decisions. The perceived although not necessarily actual pressure to seem to be doing something at the height of an emergency, leads at times to unnecessary decision making. It is not an overstatement to say that "decisions for the sake of making decisions" are sometimes made.

## Operations

Operations (i.e., those tasks which directly meet disaster demands rather than those directed at coordination or other response demands) are particularly entered into if some slack or failure is seen in the activities or operational emergency organizations. Just as in the case of policy making, tasks are sometimes carried out to give the appearance that something is being done. One unfortunate consequence of this is that if some new crisis develops, necessary

resources or personnel may have already been committed or used for unnecessary activities.

### Information Gathering

Information gathering tasks (i.e., those directed at efforts to determine the nature and extent of disaster conditions) are not always the initial focus of activities of EOCs, but at times are continued to the extent that they degenerate into the seeking of information for information's sake. However, since records are so poorly kept at very many EOCs, the information that comes in is frequently lost for collective purposes. Furthermore, EOCs seem far more effective at gathering than at exchanging information, and more effective at exchanging information than distributing it among organizations.

### Dispersal of Public Information

Dispersal of public information (i.e., those tasks directed at informing the news media and the general public) dominate and in fact may interfere with other EOC tasks. There are several reasons for this. One is the constant and often insistent requests for information by mass media personnel. Another is the attitude of many officials that it is important a positive image be conveyed to the general public, and cooperation with media personnel is seen as crucial for meeting that goal.

### Hosting Visitors

Hosting visitors (i.e., those tasks necessary to handle the convergence of VIPs and others on EOCs) is frequently a major source of conflict and stress, although often kept latent, between local community officials and "outsiders". Local personnel in the EOC frequently resent the presence of all persons they see as not being directly relevant to the operations of the EOC. In actual fact, "visitors" sometimes do get in the way of operations and other tasks. At the very minimum they require the attention and time of some official.

In conclusion, we should note that more specific tasks in an EOC are emergent than is usually recognized in pre-planning especially with respect to obtaining and processing information. Overall, local EOCs tend to have multiple and far from integrated functions and tasks, and particularly have a variety of problems with respect to both coordination and information. Of course if planning were totally and adequately implemented, such problems might not arise, but implementation is difficult to accomplish as we will now note in reporting on still another part of our research effort.

## The Implementation of Disaster Planning

In our approach to the study of implementation of disaster planning we focused on about eight different topics. Within each topic we posed a series of questions. We now indicate not only the topics and questions discussed, but the answers that were derived from the data analyzed.

### I. The role of civil defense in community disaster planning.

What is community disaster planning?

Community disaster planning is an attempt to anticipate potential problems and to project appropriate solutions. It involves a continuous process of developing procedures for handling certain kinds of problematic situations, which some organization has to initiate and/or sustain. Only if both things are done can it be said that there is real implementation of planning.

Basic principles of planning need to be followed. Thus planning should focus on principles rather than details, on probabilities rather than extreme cases, and on the conveyance of information rather than the production of a written document as such. In this respect planning should concentrate on educating oneself and others about what can be anticipated to happen, what the problems will be, and what are the most efficient and effective responses possible in a community emergency.

What is the relationship between civil defense and community disaster planning?

In principle the local civil defense is the key organization to implement community disaster planning, but in actual fact the capability and willingness to do so varies tremendously in different communities. The variation in part stems from the fact that local civil defense offices vary considerably in the range of tasks undertaken, the degree of saliency they have, and the kind of legitimacy that they are accorded. Only a civil defense organization that has clear-cut tasks, has high saliency and is recognized as legitimate can easily implement disaster plans. A good community position can lead to good planning.

The implications of the circular nature of this problem are many. For example, implementation of disaster plans leads to clarity of tasks, community saliency and substantial legitimacy or a generally good position in the community. It is generally suggested that initially the weakest side of the problem be worked at first. Thus, if a civil defense organization has already developed plans, its community position should be strengthened, and conversely, if the current community position is good, then effort ought to be directed toward developing disaster planning.

## II. Key assumptions in implementing planning

What is the starting point in implementing planning?

Each community will have different starting points, and, therefore, there will be somewhat different problems in implementing planning. Partly for the reasons indicated, different local civil defense agencies will occupy different positions in their respective communities. Consequently, there is no one master implementation scheme that can be imposed or developed that would universally hold for all communities although some general principles can be advanced.

The somewhat unique position of local civil defense in being perceived in one sense as somewhat of an "outside" organization in the local community is an important matter to consider. There are both advantages and disadvantages to this position. In general, it probably is helpful in the initiation of overall community planning, but may be more of a problem in the later stages of implementing disaster planning. If truly effective disaster planning is to be implemented, the local civil defense agency has to be seen as a truly local entity even though it may have some formal ties and relationships with extra-community organizations.

What is the objective in implementing planning?

What has to be "sold" is disaster planning, not the agency implementing it. Too often in the past, effort has been directed toward gaining acceptance of the civil defense organization rather than the activities it undertakes. Thus, the objective is an explication of the advantage and need of local community disaster planning, not the creation or enlargement of another government agency. Advantages and needs are not always self-evident and must be made explicit.

The nature of different resistances to implementing planning needs to be examined. In all cases some obstacles and objections will be encountered; this is natural and to be expected. Resistances should not be discounted or ignored, but instead a special effort must be made to understand the perspective of objecting groups and officials.

### III. Role of the public in implementing planning

What is the general public attitude toward civil defense and disaster planning?

The evidence indicates that attitudes of the population at large are generally favorable toward both civil defense and disaster planning. However, it is necessary to recognize that a favorable orientation is strongest for the abstract idea; it is probably less favorable for specific implementation particularly if there are costs involved. Furthermore, the general public is more likely to be positive regarding disaster planning than it is for civil defense, regarding which a vocal minority of the population has strong objections because of nuclear war implications. In addition, public support or lack of support is only partly correlated with the views and attitudes of other organizations and community officials.

What degree of public involvement in implementing planning is necessary?

There is considerable mythology about the crucial need of grass root or direct mass participation in planning. This is a view that widely prevails in many other areas also, but its widespread nature is more an ideological than an actual fact. Initiation of planning in particular is best undertaken by some key group with sensitivity to possible public reactions. Selective inputs from public groups is also desirable, and is to be obtained by consultation with major community organizations and representatives of important segments of the population.

In what ways is public involvement important in implementing disaster planning?

The public is crucial not in terms of its involvement in participation but in relation to its awareness and knowledge of the disaster planning undertaken. As already noted, feedback from the public is necessary at all stages of the planning process. This requires, therefore, that the public be kept well and fully informed about what is planned and what deliberate efforts be made to ascertain what is seen as objectionable, disturbing or questionable to the public in general. In the long run, any disaster plan can be effective only to the degree that community residents and groups have knowledge of and accept their projected roles in the emergency planning undertaken.



#### IV. Context of implementing planning

What is the larger social context within which any planning must take place?

In all situations, it is necessary to take into account at least four larger contexts within which implementation of disaster planning must take place. These are the political/legal context; the jurisdictional context; the context of the existing state of overall community and organizational emergency planning apart from civil defense; and the historical context regarding disasters, disaster planning, and civil defense that exists in a given locality. While these four are not the only factors operative, they are present in all cases to some degree. Attempts at implementing disaster planning which do not take them into account are doomed to be failures.

What is important in the political/legal context with regard to the implementation of disaster planning?

At some point realistic community disaster planning involves certain kinds of political decisions and certain kinds of legislation. There is sometimes a strong tendency to assume or perhaps pretend that planning and its implementation is primarily a technical and administrative problem. To do so is to be totally unrealistic. The political/legal context is more of a permissive rather than determinative context, however.

What is important in the jurisdictional context with regard to the implementation of disaster planning?

Different jurisdictions are always involved in any kind of good planning and in the implementation of disaster plans. In fact, one mark of a good plan is that it relates possible different jurisdictional responses into a coordinated disaster planning effort. Furthermore, because of a trend toward metropolitan governments and coordinating governmental councils at the local community level, the jurisdictional problem is becoming more acute. There is a need to be imaginative and innovative in planning because of this.

What is important about the context of existing overall community and organizational planning (apart from civil defense), for the implementation of disaster planning?

The greater the degree of non-civil defense planning already existing in a community, the greater will be the difficulty of civil defense implementing the planning. This is true whether this be overall community disaster planning or organizational emergency planning. However, even in these situations, it is likely gaps in planning exist which the local civil defense can utilize to press its case. In some rare instances, it is possible that civil defense cannot become a salient organization in the community, but this does not preclude it from playing a role in implementing disaster planning.

What is important about the historical context in affecting the implementation of disaster planning?

All communities have some images about disasters, disaster planning and civil defense. These images are usually based on past experiences or perceptions, although they are not necessarily valid or correct ones. In many communities,

the historical image (e.g., that civil defense is exclusively nuclear oriented or that its personnel are primarily patronage beneficiaries) is of such a nature as to provide a hindrance to the development of disaster planning by civil defense. In some cases, effort might have to be spent to dispel the image left from the historical context if effective implementation of community emergency planning is to be achieved.

#### V. Implementing planning in community organizations

What are the critical units within a community in disaster operations?

In actual disaster operations, many elements of the community do become involved -- individuals, family units, neighborhoods, public and private organizations, and so on. The totality of this effort is usually called the community effort. The most significant elements of this effort are found in the activities of the various community organizations. These organizations are able to effectively mobilize resources to cope with the demands which the disaster agent creates. Neither individuals nor family units possess the resources necessary to cope with such problems, although both individuals and family units can provide added and supplemental assistance. Individual and family unit assistance is usually effective primarily because they supplement on-going organizational activity. So organizations are the key units within the community and should be initially the major focus of the effort to implement disaster planning.

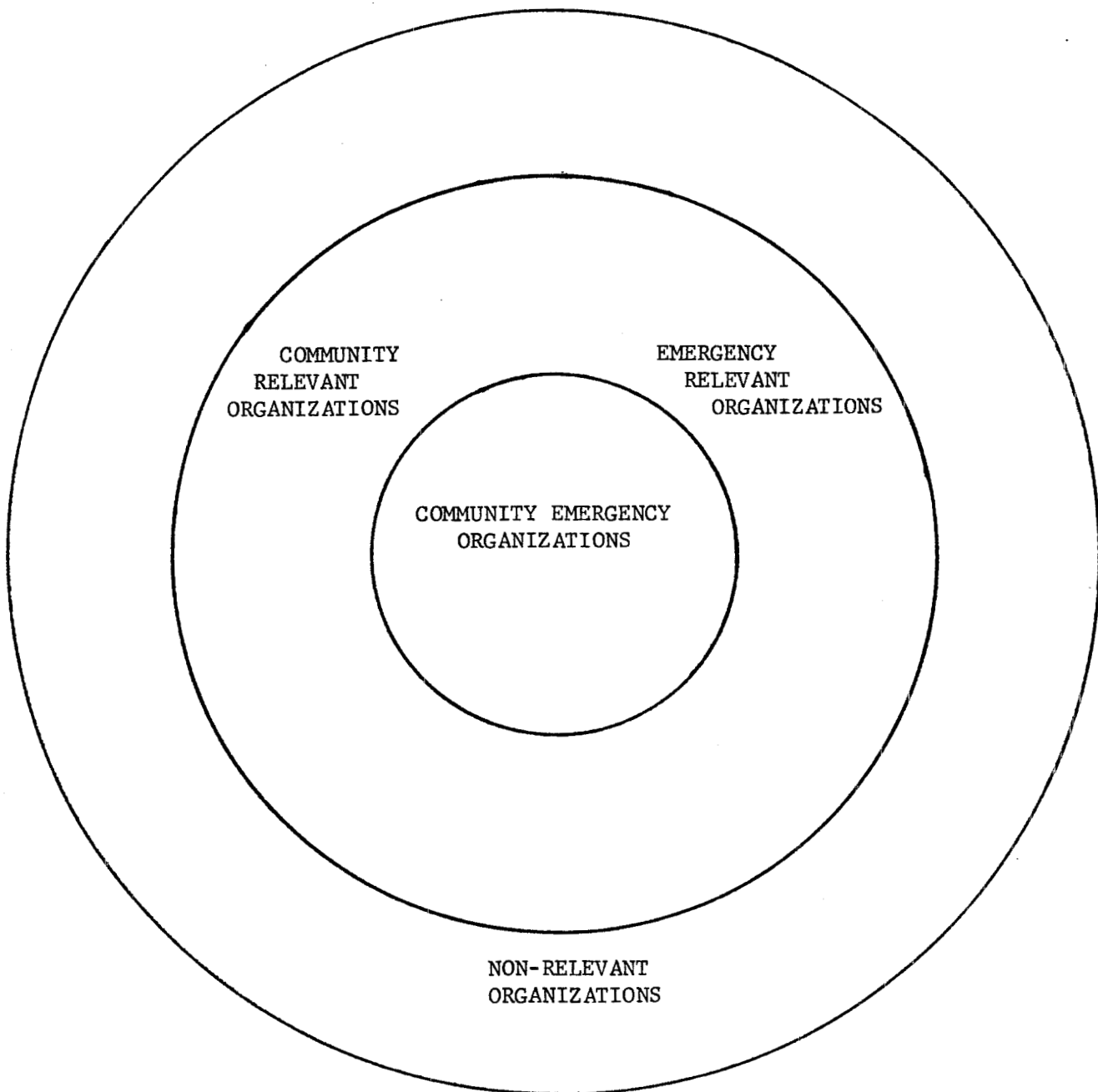
Which community organizations should be involved in disaster planning?

Every community has a variety of organizations but all are not equally relevant or do not become equally involved in disaster tasks. One might list by name the various organizations that may become involved but the identification process of such organizations can be clarified by noting that some community organizations have, as part of their "charter," a responsibility to become involved in tasks when emergencies occur. These would be illustrated by police and fire departments, hospitals, and so on. In addition, there are organizations which have resources that can become useful in emergency situations. Taking these two distinctions into account, four different types of community organizations can be identified as can be seen in the table that follows.

## Type of Community Organization

| <u>Description</u>                | <u>Examples</u>   | <u>Organizational Character</u> |                            |
|-----------------------------------|---|---------------------------------|----------------------------|
|                                   |   | <u>Community Orientation</u>    | <u>Emergency Resources</u> |
| Community Emergency Organizations | Police, fire, Red Cross, etc.                             | +                               | +                          |
| Community Relevant Organizations  | Welfare, religious and service organizations, etc.        | +                               | -                          |
| Emergency Relevant Organizations  | Contractor, department store with trucks, etc.            | -                               | +                          |
| Nonrelevant Organizations         | Luxury, retail stores, entertainment establishments, etc. | -                               | -                          |

If these four types of organizations are seen as a set of concentric circles, the degree of importance to disaster operations and thus the critical necessity for prior planning becomes apparent.



Should disaster planning be the same for all organizations?

The answer is obviously no. For certain organizations, disaster planning is critical, but for others, it can be very restricted. For those organizations which have been called non-relevant for the total community response, the primary attention of disaster planning should be on how to maintain the organization during disaster impact at minimum levels. Such organizations often close down completely and thus provide manpower resources which can be utilized by other involved organizations. In these organizations, the focus should be on self-maintenance in which demands made on other community organizations are minimized. In other words, in organizations which are not going to be involved, the major emphasis on disaster planning should be to minimize their dependence on the other organizations which will be critically involved in disaster operations. The logic for this is to reduce the overall demands which are made on emergency

organizations to partially offset the increased demands created by disaster impact. Other differences in approaches to implementing disaster planning are noted later.

What should be the approach toward implementing disaster planning in emergency relevant organizations?

The focus of disaster planning in emergency relevant organizations should initially include attention to the maintenance of the organization in disaster situations so that demands on other organizations can be minimized. In addition, since these organizations already possess resources which can and will be important for disaster operations, they should be primarily concerned with thinking out the mechanisms by which they can allocate the resources they possess to the larger community system. Such organizations do not need elaborate plans which involve complex behaviors in the case of threats. Such organizations are primarily "stand-by" arms of the community and are not utilized until need is extensive. In "normal" emergencies, these organizations are seldom needed.

The planning focus within such organizations can be concentrated primarily at the top level and does not need to involve, except in the most rudimentary manner, all segments of the organization. The primary problem of these types of organizations is centered on questions such as: Where in the organization is the authority which would release these resources? Through what channel does the request come? What are critical points of the emergency system which will involve the organization?

Another major focus of disaster planning for emergency relevant organizations should be in the creation of an atmosphere which emphasizes the obligation of such organizations to become involved when they are "needed." Many of these organizations are private and profit oriented. Their involvement comes about from "desire," not legal requirement. So much of the implementation of disaster planning depends on the creation of a sense of obligation on the part of such organizations that they should and will contribute part of the resources they possess, if needed. So, much of disaster planning will be focused on creating this sense of obligation among those organizations which do possess relevant resources.

What should be the approach toward implementing disaster planning in community relevant organizations?

In contrast to the emergency relevant organizations, community relevant organizations have the willingness to help, but have a minimum of other resources. Generally, such organizations do have potential manpower reserves. Disaster planning within such organizations should focus on the orderly mobilization of these manpower reserves and the process of acquiring other resources within the community which will be necessary for their operations. The concern with orderly mobilization should involve some rudimentary plans for alerting organizational members, incorporating volunteers, providing resources for their own personnel so that dependence on other organizations is minimized.

In addition, the planning for those at top levels of such organizations should be focused on a knowledge of where the resources that they might need can be acquired and the various mechanisms which are necessary for their acquisition. For example, if an organization becomes involved in a large scale shelter operation, they need to know where such facilities are, how they can be obtained, and how they can be staffed and provided.

What should be the approach toward implementing disaster planning in community emergency organizations?

Such organizations have a willingness and responsibility to help in emergencies and also possess resources which are necessary in "normal" emergencies. In such organizations, the day-to-day base on which these organizations respond to emergencies needs to be extended to meet the increased demands which can develop from disaster impact. In addition, since such organizations usually possess a balance of resources which allow coping with their ordinary emergencies, planning should focus on the possible increased needs for these resources. In particular, needs for additional manpower and the utilization of this manpower should be given attention. Ways in which this manpower can be introduced and organized without disrupting the usual routine need to be explored.

One major consideration which needs to be emphasized in planning centers around the increased interdependence among organizations. This new interdependence is a by-product of disaster impact. Most community organizations work out mechanisms of coordination among themselves as they work out "normal" emergencies. Disaster impact and the tasks that it creates involve a large range of community organizations which have not before worked together in the same fashion. Therefore, increased attention has to be given, particularly in the community emergency organizations, to the ways in which all organizations can be linked together. This means more attention has to be given to liaisons between and among the whole range of organizations. This is particularly critical in planning within community emergency organizations since they become the focal point of community activity.

Are there general concerns for implementing planning that apply to all types of organizations?

There are certain general themes of disaster planning which do cut across all organizations. In general, planning should focus on broad principles or operations, and not be preoccupied with details. Within each organization, there should be concern with ways in which they can mobilize and allocate resources in a fashion which minimizes dependence on other involved organizations, particularly the community emergency organizations. Also, a primary concern should be to make disaster responsibility and the outlines of disaster operations an integral part of the expectations and routines of each organization.

Since disaster impact creates changes in the environment of every organization within the community, certain mechanisms of information and intelligence gathering have to be developed which provide organizations information as to the initial consequences of the disaster agent. What have been the effects of the disaster agent? What tasks did it create which are the responsibility of the organization? What effects has the disaster agent had on the resources and operations of the organization itself? Information sought about the actual impact is a critical dimension which is seldom incorporated in disaster planning. It should be.

In addition, since disaster impact creates greater interdependence among organizations, particular consideration has to be given to developing linkages among organizations. Only in this way can the actual tasks which have been created be adjusted to the pre-disaster definitions of responsibility. In addition, each organization has to be concerned with the overall planning and operation in order to understand how the specific organizations fit into the total pattern. A more adequately an organization can visualize the nature of the role that it

will play in various types of emergencies, the more adequately it can realistically think out the dimensions of its own anticipated tasks.

How does implementing disaster planning differ from other types of organizational planning?

In many ways, disaster planning does not differ from any other attempts on the part of organizations to plan. Both types involve attempting to anticipate future demands which will be made on the organization. The organization then has to develop techniques to mobilize and allocate these resources. To be effective, planning requires an accurate anticipation of some future state of affairs and then tracing out the implications of this future state for the various parts of the organization. The same techniques and skills which are utilized in any long term planning effort then are precisely the same techniques and skills that are necessary for other types of planning, including implementing disaster planning.

## VI. Total community planning

Is disaster planning different from other types of emergency planning?

By and large, emergency planning for different types of agents has important elements of continuity. The important difference with disaster planning is that disaster agents often create widespread impact which necessitates more extensive involvement of a wide variety of community organizations. Routine emergencies often involve the same organizations and, as a consequence, these organizations develop ways of coordinating their efforts. Widespread impact necessitates the involvement of working groups which have had little previous experience in coordinated action. Thus, much more attention has to be given to problems of coordination in disaster planning than would be necessary in other types of emergency planning. In addition, with the probability of widespread impact in disasters, planning has to attempt to deal with the possibilities that some of the emergency resources within the community may be affected by impact. In most "routine" emergencies, relevant organizations can concentrate on operational problems, but in disaster there is the possibility that organizations might have to deal with their own internal losses at the same time that they have to become operational for the larger community.

What should be the focus of total community planning?

The primary focus of total community planning is to develop an awareness on the part of all segments of the community of the general outlines of disaster planning. It would reinforce the necessity of planning within the various sub-units, e.g., organizations. By taking an overall view, certain gaps in responsibility and concerns among the existing organizations will be uncovered. Key tasks which emerge from disaster operations and which are seldom the responsibility of any specific organization will have to be considered and responsibility allocated. For example, tasks involving the collection of information as to the scope and intensity of impact have to be achieved. The possibilities that extensive search and rescue operations might be needed and have to be organized should be a major focus. Mechanisms for the development of overall coordination have to be developed. In addition, some understanding of the fact that disaster impact creates peak load problems for certain segments of the community needs to be understood and mechanisms developed to provide assistance for such segments of the community at these times.

What is the key factor in implementing total community planning?

The key element in implementing total community planning is the development of effective links between the various organizations and groups within the community which would become involved in a widespread disaster. No organization will be able to work at tasks without the dependence on and the cooperation with the other segments of the community. The organizations that become involved sometimes have competing domains. They have differing bases of support. They have differing forms of "loyalty" in order to develop operational readiness.

Are there certain pre-disaster tasks which are essential to the development of total community planning?

There are certain tasks and certain resources which are more properly seen as responsibilities of the "total" community rather than the "responsibility" of any specific segment. An example of a "community wide" task would be the development of a hazard analysis. An example of a "community wide" resource would be an emergency operations center.

What is hazard analysis?

Hazard analysis is the development of information concerning the disaster history of a community and the assessment of future probabilities of specific disaster agents. Few communities maintain information about past disaster impact in any systematic fashion. By utilizing past community records and information from relevant organizations, information can be developed about potential threats. For particular disaster agents, such as flood, areas of potential damage can be indicated from previous high water marks. The existence of dams and other forms of water retention can be noted and potential damage can be anticipated from topographical maps. Hazard analysis provides records which serve as both a form of early alert to the types and a range of problems which have to be considered in disaster planning. In addition, it provides forecasts of particularly vulnerable areas within the community. It also might uncover potential threats which might be excluded by community members.

What is an Emergency Operations Center?

An Emergency Operations Center (EOC) is primarily a location and a facility which can serve as the major focus for coordination of disaster operations. It should provide space for personnel from key organizations. It should be a place which acts as a collection point for information about disaster impact and on the basis of the continued collection of information, tasks can be determined and resources allocated to these critical tasks. It should possess communication equipment which allows the collection of information and the assignment of tasks. Its primary function is to provide a central location for the many elements which are involved in disaster planning so that their efforts can be coordinated in an actual operating situation. Since EOC's are vulnerable in disaster impact, alternative EOC sites are also necessary.

In order to develop total community planning, should communities follow "model" plans?

Planning is a process and is not an end result. Model plans have the great disadvantage of acting as a substitute for thought and as a false solution to a difficult problem. While model plans can often reveal areas which have been



overlooked in the planning process, it is more useful for a community to attempt to think out, in a collective fashion, the overall dimensions of the threats to the community and the various elements necessary for a response to these threats. It is through this process which is, in effect, continuous that actual effective planning is possible.

What is the role of local civil defense in implementing the planning process?

The concept of civil defense was derived from a wartime context but it has become applicable to all types of emergency situations. In its most inclusive meaning, civil defense means the total community effort in responding to the emergency. In this sense, every activity of every organization is part of the total civil defense effort. In addition to the more inclusive idea, in most communities there are civil defense offices which are part of local government operations. These offices have a special responsibility in implementing overall community planning. They possess information, skills and other resources which are critical to the effort. In addition, local civil defense offices can be of assistance in planning and organizing certain critical disaster tasks which are not handled by existing community agencies. Civil defense offices have as their mandate planning at the community level which involves all of the various parts. The results of disaster planning which will be expressed in actual disaster operations thus provides the most accurate meaning of the concept of civil defense.

VII. Utilizing extra community resources in implementing disaster planning

What other resources are useful in implementing local disaster planning?

Many "local" organizations which become involved in disaster planning have resources outside the community which can be utilized. Many local agencies have state and federal counterparts. Many local agencies are part of a larger national organization, such as local chapters of the American Red Cross. Other local agencies are tied through professional associations to similar units within other communities, such as contact between a police department and other police departments.

Experience can be channeled from these other "units" into the local community in a number of ways -- through publications and through the utilization of "experts" from outside the community who have had experience in other disaster planning operations. While disaster planning is definitely a local-based effort, learning can take place by utilizing the experience of others in similar situations. Most organizations have these resources available to them through their extra-community ties.

Where is knowledge available concerning the impact of disaster?

While there is a great deal of popular literature about disasters in the form of news accounts, dramatic stories, and even novels, such accounts generally do not have much accurate information about disasters. Such materials often provide sensational accounts of impact and personalized accounts of tragedy but seldom provide accounts of the consequences of disaster planning or the effectiveness of disaster operations. Summaries of the social scientific research on disasters can be found in different annotated bibliographies published by research organizations such as DRC. In addition, professional associations often provide, through their periodicals, accounts of disaster impact on specific agencies within particular disaster impacted communities. For example, the various periodicals devoted to hospital operations will often include as a case study

the experience of a particular hospital in a specific disaster situation. There is considerable literature on disasters which is potentially available but often some effort is required in locating materials which are specifically relevant to a particular organization.

Where are materials available which would be useful in implementing disaster planning?

The same sources which can provide knowledge about disaster impact are also the primary sources of materials which can be of assistance in disaster planning. Many materials are available from the Defense Civil Preparedness Agency which could be obtained through the local civil defense office or by writing state civil defense directors.

Publications such as Disaster Operations: A Handbook for Local Government, Defense Civil Preparedness Agency, July 1972 provide a series of suggestions as to how to develop a basic plan of operation for a variety of types of emergencies. American Red Cross has a disaster handbook for their local chapters which outlines responsibilities and procedures. Groups such as International Association of Chiefs of Police, the International Association of Fire Chiefs, the American Medical Association, the American Hospital Association, etc., often have materials available which provide both knowledge and suggestions for community planning.

Where are training opportunities available which are useful in implementing disaster planning?

Many organizations which have headquarters outside the local community often sponsor workshops, conferences and training sessions on disaster planning. National organizations often have staff people who have major responsibility in training for disaster planning.

It is also useful to attempt to incorporate certain aspects of disaster responsibility and behavior into on-going training. For example, most communities have training programs for police and fire personnel. Some segment of this training program should contain instruction on those aspects of disaster planning which are particularly relevant to that organization.

#### VIII. Utilizing opportunities for implementing disaster planning

When is the best time to initiate disaster planning?

While there is perhaps no best time to initiate disaster planning, a recent disaster experience, in which the consequences of the lack of disaster planning is evident, provides the opportunity for revealing community needs. Specific problems which become apparent in the aftermath of a disaster -- such as problems in warning, difficulties in housing evacuees, questions of damage assessment, etc. -- provide an obvious justification for initiating disaster planning on a community-wide basis.

Often the initial interest subsides rapidly so that the first steps and the preliminary ground work should be undertaken rather rapidly. A recent disaster experience also can provide the opportunity to update and rework existing disaster planning. Such opportunities can provide the justification that such problems

are "real" and affect the community in certain ways rather than being a set of problems with low probabilities and little potential effect.

What is the best source for the initiation of disaster planning?

Since planning is oriented toward the total community, the most logical initiator is the major elected official(s) -- the mayor or county commissioners. Interest and initiation by the major elected official is seldom done without support and also encouragement from other segments within the community. In some instances, a particular city council member may take particular interest in disaster planning and see that it is achieved. In other situations, a particular key organization, such as the police department or the local civil defense director will provide the initiating force. There is no best procedure except to utilize the existing interests and skills within the community to provide the beginning and, with a beginning, other individuals and groups can be added as the implementation of the planning process unfolds.

What are ways to interest those not involved in disaster planning?

a. Disaster exercises and simulations. Sometimes interest in community wide disaster planning can be increased by attempts to simulate disaster exercises. While disaster exercises are often seen as "practice" sessions of already existing disaster planning, simulation can also provide a learning experience for particular individuals and generates continued interest in future disaster planning.

Sometimes there is the attempt to interest large segments of the population in disaster planning through exercises and simulations and the "results" are often seen as disappointing. It is likely that if disaster exercises and simulation stimulate a small number of individuals to consider and reconsider their role and the role of their organization in the total planning process, such exercises have an important value.

Materials and instructions of types of disaster simulations are usually available through the CDUEP program. A set of lesson plans on Developing and Maintaining Operational Readiness: Exercising the Local Community has been produced by DCPA.

b. The utilization of on-site assistance. A particularly important resource is now available to communities who hope to engage in disaster planning and this is a program of the DCPA called "on-site assistance." Such a program involves the utilization of "outside" personnel to assist the local community in the planning process. It would involve teams to assist in a community readiness survey, an initial hazard analysis, and then to develop an action plan in which improvement priorities are established. A planning schedule is developed and follow-up assistance is assured. It has the advantage of increasing awareness of various elements of the community as to the need for disaster planning since there is major dependence on local officials to be involved in the process at every step. On the other hand, the "outside" team provides assistance both at the motivational level and also can provide experience and expertise.

How can already existing resources within the community be used to implement disaster planning?

In many American communities, there are resources which have accumulated as

part of the preparations in planning a response to nuclear attack. Many of these resources are equally useful if utilized in the disaster planning process. Some communities have effective and well equipped EOCs already. Other communities have elements which could become, if supplemented, key parts of such an EOC. Many of these existing resources are under-utilized at this time and the possibility of utilizing these resources for a greater range of emergencies is often seen as a reason for initiating disaster planning.

Many local organizations have training programs for their personnel. Such established training programs provide a structure in which additional dimensions of training for disaster can be incorporated. Schools and in-service programs of all kinds are only the more obvious possibilities along this line.

Most communities have vast resources which already exist and which are useful and even essential in disaster planning. One of the major advantages of disaster planning is that it can concentrate on combining already existing resources in ways that can be mobilized in the event of disaster impact. Disaster planning does not have to be overly concerned with the acquisition of new and costly hardware. It is primarily a problem of organizing the resources which communities possess but do not now use effectively.

## CHAPTER IV

### CONCLUSIONS AND RECOMMENDATIONS

A number of implications and possibilities suggested by our work have already been indicated. We conclude, therefore, with some general statements. For purposes of exposition, we group them under the original six objectives of our research.

1. Field studies of disasters continued to be of value to understanding disaster planning and responses. Such field studies should be continued in the future, with the following four modifications. First, a wide range of disaster events should be included, especially technological disasters which have been understudied. Second, field work should be more extensive, going beyond the emergency period to the longer run recovery period because there can be only incomplete knowledge if focus is only on the disaster impact period. Third, state and regional level disaster operations and planning should be examined, as well as what happens at the local community level, because the latter cannot be fully understood without greater knowledge of the former. Fourth, comparable field studies should be done in countries outside the United States, especially in societies structurally and functionally similar to American society so that activities observed elsewhere can be examined for their applicability in this country.

2. The importance and relevance of EOCs in disasters has been amply documented. However, it is also clear that EOCs do not work as well in operation as they should according to plans. The reasons for this gap between the ideal and the actual needs to be further examined, with particular attention being given to the problematical aspects discussed earlier. In particular, the functions or tasks carried out by EOCs needs to be more systematically studied. Some consideration ought to be given to conducting such research primarily by using the technique of participant observation rather than relying heavily on intensive interviewing.

Our effort to gather relevant documents at EOCs and other centers of disaster activities was not successful for the reasons indicated. However, many of the complicating factors mentioned could be circumvented, especially if we were working with a longer time frame. A renewed attempt ought to be made to gather emergency-relevant documentary data. In addition, more realistic assumptions of what could be done with any such gathered material should be considered in any new study design. While it is doubtful if an ideal sequence of desirable behavior could be derived from a documentary data gathering and analysis study, it might be possible to derive from such a study the kinds of records which ought to be kept by key organizations at times of disasters.

3. Our work clearly indicated the role the local office of civil defense could play in disaster planning. The study also suggested the conditions which would facilitate the involvement of local civil defense in disaster planning. Thus, further research on these matters would not seem to be of high priority. Instead, the implications of our work need to be put into practice. This requires that the special circumstances of each particular given situation be taken into account.

4. Our work on the conditions associated with the implementation of disaster planning was, in itself, almost exclusively aimed at producing recommendations, and it would be superfluous to repeat here our position. However, the focus of our research was primarily at the local community level. There is a need to derive a better understanding of the interface in planning between local levels and higher echelons, as well as the nature of and conditions affecting disaster planning at state, regional and national levels. Systematic and comparative research ought to be undertaken at the latter levels, a point we also made above when discussing future field studies.

5. We were not able to examine in any detail the information flow at times of disaster. This is a topic still worthwhile studying. There is reason to believe that if such an effort is attempted again, more attention ought to be paid to the role of mass media organizations in the information flow than was implied in the research objective under which we initially operated.

6. The work we were able to do on evacuation behavior suggested that re-examination of past studies on the topic might be of limited value. What seems to be called for, instead, are systematic and comparative studies of evacuation as it will occur in future disasters. It does not seem that re-examination of past data could be in any way comparable to what might be obtained from collecting new data in new field studies.

## APPENDICES

- A. Examples of interview guides used in field studies.
- B. Interview guides used for field studies of local civil defense in disaster planning.

## Appendix A

April 25, 1973

### Des Moines Blizzard Study

As you already know, we (I) are (am) from the Disaster Research Center of Ohio State University. Recently we have been interested in seeing how people respond to emergencies created by blizzards, ice storms, and other heavy snow falls. We have chosen Des Moines as one of the cities to study. The questions will deal with your organizational response to the problems that confronted you, that is, how you succeeded in overcoming problems of this magnitude.

Let me assure you that anything you say will be kept strictly confidential and that your name will never be connected with any publications that may result from this research.

Do you have any questions?

#### Normal functioning

- 1) What is your name and title?
- 2) What types of things is your organization usually responsible for?
- 3) What geographic area are you usually responsible for?
- 4) Under normal conditions, how much contact do you usually have with other organizations?  
Probe: Such as: CD, Police, Fire department, Department of Utilities, Private Utilities
- 5) Under normal conditions, do you usually have contact with any organizations other than those in the city?  
Probe: such as working arrangements with other organizations similar to yours, say in the county or other towns? How about the state?

#### Blizzard

- 1) What did your organization do in the blizzard?
  - a) What duties did they perform?
  - b) Was this on the first day?
  - c) How long did it continue?
  - d) Did you continue your normal operation also?
- 2) How much of your organization was involved?
  - a) How many people? (of how many?)
  - b) How much equipment?
  - c) How long was it involved?
- 3) Did you get any equipment or personnel from any other organizations?
  - a) If so, when?
  - b) How many?
  - c) What did they do?
  - d) How long did you keep them?
  - e) How important a role did they play?
- 4) Who coordinated your efforts?  
Probe: Internally  
Externally (mention Civil Defense)



- 5) Did you have any contact with Civil Defense?
- 6) What other organizations did you work for?
- 7) What was your major concern during this period?  
Did you continue your usual operations?
- 8) Has this experience changed your future operations in any way?
- 9) Do you feel that you've gotten adequate cooperation from other city agencies?  
The county? Private agencies? The state? The federal government?
- 10) What type of problems did the people of Des Moines have to face?
- 11) Is there anything else you'd like to add that may help us? How about any other people for us to contact?

Thank you

May 1, 1973

St. Louis Flood: Warning and Pre-impact Activity

- I. Descriptive chronology of activities  
Warning (when, who, how, what?)  
Pre-impact preparations (when, who, how, what?)
- II. Major Problems and how solved  
Warning  
Pre-impact Preparations
- III. Interorganizational Relations: The focus here is on communications, meetings, and substantive exchanges between organizations.
  1. What were the organizations with which communications took place beginning with when you first learned of the flood threat.  
(Probe: police, fire, civil defense, weather bureau)
  2. Substance of communication  
(Probe: was organization initiator and/or receiver?  
reciprocal and/or one-way?  
ordered or requested?)
  3. In what way did communication differ, if any, from normal times?  
(Probe: means, frequency, substance)
  4. Were any meetings held among organizations to consider task areas?  
(Probe: when and where?  
which organizations present?  
who was in charge?  
what was discussed?  
what was decided?)
  5. Was there any transfer (either providing or receiving) of: personnel  
materials  
services with  
other organizations?
- IV. Lessons Learned: What lessons learned?  
Would organization do anything different in the future?  
What recommendations to other similar organizations?  
What recommendations regarding overall community coordination?

RESPONSE COORDINATION FIELD INSTRUMENT  
Jonesboro, Arkansas

1st Revision  
6/73

Organization Being Interviewed \_\_\_\_\_

Position of Respondent \_\_\_\_\_

Task \_\_\_\_\_

When Initiated? \_\_\_\_\_

When Completed? \_\_\_\_\_

Organization Coordinated With \_\_\_\_\_

TRANSFERS OF PERSONNEL:

No. \_\_\_\_\_ Type \_\_\_\_\_ Direction of Transfer \_\_\_\_\_

Position of Individual contacted in other organization \_\_\_\_\_

Types of Contact:

|                                 |       |            |       |
|---------------------------------|-------|------------|-------|
| Formal Meeting:                 |       | Frequency  |       |
| Both Present but no Interaction | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Both Present and Interacted     | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Informal (Face to Face)         | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Phone, Radio                    | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Memos, Reports, Letters         | _____ | & Length   | _____ |

How important was this transfer to complete this task? \_\_\_\_\_

Direction of Contact(s): Self-initiated \_\_\_\_\_% Other Initiated \_\_\_\_\_%

TRANSFERS OF EQUIPMENT:

No. \_\_\_\_\_ Type \_\_\_\_\_ Direction of Transfer \_\_\_\_\_

Position of Individual contacted in other organization \_\_\_\_\_

Types of Contact:

|                                 |       |            |       |
|---------------------------------|-------|------------|-------|
| Formal Meeting:                 |       | Frequency  |       |
| Both Present but no Interaction | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Both Present and Interacted     | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Informal (Face to Face)         | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Phone, Radio                    | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Memos, Reports, Letters         | _____ | & Length   | _____ |

CONTINUED ON NEXT PAGE.

How important was this transfer to complete this task? \_\_\_\_\_

Direction of Contact(s): Self-initiated \_\_\_\_\_% Other Initiated \_\_\_\_\_%

TRANSFERS OF INFORMATION:

Seeking Information \_\_\_\_\_% Giving Information \_\_\_\_\_%

Position of Individual Contacted in other organization \_\_\_\_\_

Types of Contact:

|                                 |       |            |       |
|---------------------------------|-------|------------|-------|
| Formal Meeting:                 |       | Frequency  |       |
| Both Present but no Interaction | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Both Present and Interacted     | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Informal (Face to Face)         | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Phone, Radio                    | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Memos, Reports, Letters         | _____ | & Length   | _____ |

How important was this transfer to complete this task? \_\_\_\_\_

Direction of Contact(s): Self-initiated \_\_\_\_\_% Other initiated \_\_\_\_\_%

TRANSFERS OF INSTRUCTIONS:

Seeking Instructions \_\_\_\_\_% Giving Instructions \_\_\_\_\_%

Position of Individual contacted in other organization \_\_\_\_\_

Types of Contact:

|                                 |       |            |       |
|---------------------------------|-------|------------|-------|
| Formal Meeting:                 |       | Frequency  |       |
| Both Present and no Interaction | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Both Present and Interacted     | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Informal (Face to Face)         | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Phone, Radio                    | _____ | & Duration | _____ |
|                                 |       | Frequency  |       |
| Memos, Reports, Letters         | _____ | & Length   | _____ |

How important was this transfer to complete this task? \_\_\_\_\_

Direction of Contact(s): Self-initiated \_\_\_\_\_% Other Initiated \_\_\_\_\_%

NON-EMERGENCY CONTACT:

Purpose \_\_\_\_\_ Frequency \_\_\_\_\_

Type: Formal Meeting \_\_\_\_\_% Informal Face to Face \_\_\_\_\_% Phone \_\_\_\_\_%

Direction of Contact(s): Self-initiated \_\_\_\_\_% Other Initiated \_\_\_\_\_%

Was it particularly easy working with this organization in this task area and why?  
Or, were there difficulties in working with this organization in this task area  
and why?

## Appendix B

7/10/72

### DISASTER PREPAREDNESS STUDY

1. Introduction
2. Interview guide
3. Ratings of community disaster probability
4. Organizational responsibilities in disasters
5. Tasks in disasters

\*\*\*\*\*

Organizations to be contacted (modifications might be suggested by disaster plans)

1. City civil defense (all personnel possible)
2. County civil defense office (all personnel possible)
3. City police department (responsibility for planning, operations - 2/3)
4. City fire department (responsibility for planning, operations-2)
5. Safety director's office (1)
6. Mayor's office (aide with emergency responsibilities - 1)
7. City Manager (or aide-1)
8. Medical society (1)
9. Hospital association (1)
10. Hospitals (largest 3-5 in area - 2 each)
11. Public health department (1/2)
12. Utilities: both public and private - electric (emergency planner-1)
13. - gas (emergency planner-1)
14. - water (emergency planner - 1)
15. - telephone (emergency planner-1)
16. Red Cross chapter (disaster committee chairman, exec. sect. - 2 )
17. Salvation Army unit (disaster responsibility - 1)
18. Sheriff's department (1)
19. Pollution or environmental agencies (?)
20. Coroner's office (1)
21. Public works department: (engineering, streets, sewers, sanitation-1/4)
22. Ambulance services (might overlap over groups - ?)
23. Local National Guard units (1-3)
24. Harbor or port department (1)
25. State police local post (1)
26. Local industrial plants (security officers 1-4)
27. Airport department (1)
28. Building/housing department (1)
29. RACEs clubs (2)
30. Mass media groups (radio, television, newspapers, wire services-?)

## Introduction

I'm (given name card) from the Disaster Research Center at the Ohio State University. Most of our work involves the study of groups and organizations in natural disasters. For example, we recently did a number of field studies in the floods in Pennsylvania and the rest of the east, as well as in Rapid City, South Dakota. This (give green sheet) explains the background of the Center and some of its work that you can read about later.

Normally, we go to places after a disaster has occurred. However, in order to learn about disasters problems and improve disaster planning, we have to study cities that have not just been hit by disasters, as well as those where there has been a flood, hurricane, tornado, or something like that. So that's why we're in (X city). We can learn as much from cities that have never had a major disaster, or have not had one in several years, as we can learn from those that have just been hit, like the Pennsylvania cities.

## Interview Guide

We are doing this study in a number of American cities around the country. We are trying to find out what disasters are thought of as probable in these cities, and what disaster problems are expected. We also want to learn about the state of disaster preparedness and planning in these cities. Our focus is primarily on natural disasters.

(X city) is one of the many cities that was selected for study. We have a team in the city interviewing key community officials and other important organizational personnel that might be concerned with disasters. When we've put together all the interviews we should have a good idea of the views in (X city) about disasters.

But as I already noted, we will be talking to many people in a number of communities around the United States. Our major goal is to get the general picture about disaster expectations, problems and planning, rather than what it happens to be in any one particular city. Thus, (X city), its organizations or any of the people who will talk to us will never be identified by name in any report or analysis. Anything said here, insofar as specific details are concerned, will be confidential. We never include names in our studies and reports.

Before asking you specific questions about the disaster anticipations, problems, and preparations, and planning of (X organization), I would like to ask some general questions -- such as the kinds of natural disasters this city might undergo, which organizations would do what in the event of a disaster, and what disaster responsibilities certain groups have. Obviously most of these general questions have to do with judgements and attitudes, so there can be no right or wrong answers -- just your opinions.

Let's start out with the general question of how probable it would be that certain disasters would occur in (X city) in the next ten years. Would you please look at this list (give pink sheet)? I would like your opinions. How would you rate the probability of the disasters listed occurring in (X city) in the next ten years? Would you just circle the appropriate number?

(NOTE: Depending on time, can give to respondent with stamped, self-addressed envelope to mail to DRC, or can have respondent fill it out as you wait.)

MAKE CERTAIN IDENTIFICATION OF RESPONDENT IS ON PINK FORM

IF FILLED OUT IN YOUR PRESENCE BE SURE AND GET PINK FORM BACK.

IS YOUR TAPE RECORDER ON?



6/10/72  
National Survey  
Code # \_\_\_\_\_

Disaster Research Center  
Ohio State University  
Columbus, Ohio 43201

### RATINGS OF COMMUNITY DISASTER PROBABILITY

1. How would you rate the probability of the following events in your community, within this coming decade?

Please rate them in terms of the following six point scale by circling the appropriate number.

- 0 - not applicable to my community
- 1 - not probable
- 2 - low probability
- 3 - moderate probability
- 4 - high probability
- 5 - nearly certain

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| AVALANCHE.....                               | 0 | 1 | 2 | 3 | 4 | 5 |
| BLIZZARD OR MASSIVE SNOWSTORM.....           | 0 | 1 | 2 | 3 | 4 | 5 |
| CHEMICAL CONTAMINATION OR SPILL.....         | 0 | 1 | 2 | 3 | 4 | 5 |
| DAM BREAK.....                               | 0 | 1 | 2 | 3 | 4 | 5 |
| DROUGHT.....                                 | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| EARTHQUAKE.....                              | 0 | 1 | 2 | 3 | 4 | 5 |
| ELECTRIC POWER BLACKOUT.....                 | 0 | 1 | 2 | 3 | 4 | 5 |
| EPIDEMIC.....                                | 0 | 1 | 2 | 3 | 4 | 5 |
| FLASH FLOOD.....                             | 0 | 1 | 2 | 3 | 4 | 5 |
| FOREST OR BRUSH FIRE.....                    | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| FREEZING ICE STORM.....                      | 0 | 1 | 2 | 3 | 4 | 5 |
| HURRICANE.....                               | 0 | 1 | 2 | 3 | 4 | 5 |
| MAJOR FROST AND FREEZE.....                  | 0 | 1 | 2 | 3 | 4 | 5 |
| MAJOR GAS MAIN BREAK.....                    | 0 | 1 | 2 | 3 | 4 | 5 |
| MAJOR HAIL STORM.....                        | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| MAJOR INDUSTRIAL EXPLOSION.....              | 0 | 1 | 2 | 3 | 4 | 5 |
| MAJOR WATER MAIN BREAK.....                  | 0 | 1 | 2 | 3 | 4 | 5 |
| MASSIVE AUTOMOBILE WRECK.....                | 0 | 1 | 2 | 3 | 4 | 5 |
| METEORITE FALL.....                          | 0 | 1 | 2 | 3 | 4 | 5 |
| MINE DISASTER.....                           | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| MUD OR LANDSLIDE.....                        | 0 | 1 | 2 | 3 | 4 | 5 |
| OIL SPILL.....                               | 0 | 1 | 2 | 3 | 4 | 5 |
| PIPELINE EXPLOSION.....                      | 0 | 1 | 2 | 3 | 4 | 5 |
| PLANE CRASH IN COMMUNITY.....                | 0 | 1 | 2 | 3 | 4 | 5 |
| RADIATION FALLOUT.....                       | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| RIVER FLOOD.....                             | 0 | 1 | 2 | 3 | 4 | 5 |
| SAND/DUST STORM.....                         | 0 | 1 | 2 | 3 | 4 | 5 |
| SEVERE FOG EPISODE.....                      | 0 | 1 | 2 | 3 | 4 | 5 |
| SHIP DISASTER IN HARBOR OR NEARBY COAST..... | 0 | 1 | 2 | 3 | 4 | 5 |
| SMOG EPISODE.....                            | 0 | 1 | 2 | 3 | 4 | 5 |
|  |   |   |   |   |   |   |
| SUDDEN WASTE DISPOSAL PROBLEM.....           | 0 | 1 | 2 | 3 | 4 | 5 |
| TORNADO.....                                 | 0 | 1 | 2 | 3 | 4 | 5 |
| TSUNAMI OR TIDAL WAVE.....                   | 0 | 1 | 2 | 3 | 4 | 5 |
| VOLCANIC ERUPTION OR FALLOUT.....            | 0 | 1 | 2 | 3 | 4 | 5 |
| WATER POLLUTION.....                         | 0 | 1 | 2 | 3 | 4 | 5 |
| WATER SHORTAGE.....                          | 0 | 1 | 2 | 3 | 4 | 5 |

2. Let's go on now to finding out what you think of the following. On this card (give respondent green card) there is a list of tasks that might have to be carried out in connection with a disaster. Would you tell me for each one what organizations or groups in (X city) would have the major responsibility for the task. Let's take the first one. What organization or group in (X city) would have major responsibility for pre-disaster overall community emergency planning? (Indicate to respondent that it is possible that no one would have the responsibility, on the other hand, he can name as many groups as he wants to if he feels that they have major responsibility).

(Start with number 1 and work down through number 12)

DRC List #2

7/5/72

Which organizations or groups in your community, if any, have major responsibility for the following tasks in connection with a large scale disaster?

1. Pre-disaster overall community emergency planning
2. Warning
3. Stockpiling emergency supplies and equipment
4. Search and rescue
5. Evacuation
6. Compiling lists of missing persons
7. Care of the dead
8. Maintenance of community order
9. Housing victims
10. Providing food and clothing to victims
11. Establishing a pass system
12. Overall coordination of disaster response

GET BACK CARD FROM RESPONDENT WHEN FINISHED

3. Let's go on now to the next question. We have another card (give respondent canary card). It lists a number of federal, state and local organizations. I would like to know what major tasks or responsibilities each organization has in preparing for and responding to a large scale disaster in (X city). If they have no major task or responsibility, would you please indicate that.

(NOTE: you must take into account what the respondent has already said about any of the organizations. However, even though respondent may have already mentioned them, get a full answer here again, even though there is just repetition. If respondent is from organization listed, indicate that the matter will be discussed later in a different question.)

The first one is the city police department. What major task or responsibilities do they have in preparing for and responding to a large scale disaster?

(Start with number 1 and work down through number 10)

DRC List #3

7/5/72

What major tasks or responsibilities do the following organizations or groups have in preparing for and responding to a large scale disaster in your community. If they have none, so indicate.

1. The city police department
2. The local civil defense office (city, or city/county if joint)
3. The Mayor's office
4. The public health department
5. The local National Guard units
6. The city/county medical society
7. The sheriff's department
8. The state civil defense agency
9. The State Adjutant General's Office
10. OEP (the federal Office of Emergency Preparedness)

GET BACK CARD FROM RESPONDENT WHEN FINISHED

4. Finally, before turning to questions about your organization, there is one last general question, I would like to ask: What can you tell me about overall disaster planning and preparations in this city? For example, what organizations have taken the lead in overall disaster planning in this community?

(PROBE: Key organizations perceived as involved?  
How they have taken the lead?  
What they actually did?  
Why they have been successful?  
Whether the planning seems to be effective or not?)

#### INTRA-ORGANIZATIONAL ASPECTS

5. Let's turn now to your own organization. Does (X organization) itself have any kind of disaster plan?

(If NO,

PROBE: (a) what would seem to be reasons for lack of disaster plans?  
(b) what would likely guide actions and behaviors in case of a disaster?  
(c) would any particular organization(s) be turned to for help and guidance if a disaster occurred?

(If YES,

get copy of plan now or later and go to question 6.

If can not get copy at any time, PROBE:

(a) task or responsibilities organization would have at times of disaster?  
(b) how different lines of authority and coordination would differ from normal times?  
(c) in what way is plan activated?

6. Has any other organization helped your group in developing its disaster plan?

PROBE: (a) which organization(s)?  
(b) in what ways did they help?  
(c) who took the initiative in obtaining the assistance?

7. (if not mentioned) Has your organization had contact, for example, with such a group as the local civil defense organization in developing its own disaster plan?

(If NO,

PROBE: (a) why were they not contacted?  
(b) would they have anything to offer in terms of disaster planning?  
(c) would they have anything to do in a disaster response?)

(If YES,

PROBE: (a) nature of contact?  
(b) frequency and recency of contact?  
(c) evaluation of value of contact  
(d) general evaluation of perception of civil defense, and  
(e) its personnel)

#### INTER-ORGANIZATIONAL ASPECTS

8. Apart from the plan for your own organization, does (X organization) have a part in any written or formalized disaster plan involving cooperation with other organizations in the area?  
  
(if NO, see if any informal agreements or understandings?)
9. (if YES), what organizations are involved in the plan?
10. Which organizations will your own organization work most closely with under the plan?
11. Doing what?
12. Under the plan will some organization or group:
  - (a) assume authority and make overall decisions?
  - (b) attempt to coordinate activities?
  - (c) try to provide general information?
13. (ONLY IF CIVIL DEFENSE HAS BEEN MENTIONED IN ANSWER TO QUESTIONS 8-12, ask)  
To make the operation of the plan clearer in my mind, what, for example, would go on between your organization and civil defense?

#### BACKGROUND OF DISASTER PLANNING

14. As far as you know, does some organization or group have legal responsibility for overall disaster planning in (X city?)
15. Who?
16. On this overall disaster plan, would you happen to know when it was last revised?
17. Which organization took the initiative in making the revision?
18. Has the overall disaster plan recently been tried out or rehearsed?
19. Who took the initiative for the rehearsal?
20. Apart from rehearsals, have there been any formal or informal meetings about the plan in the last several years?
21. What organization was responsible for calling the meetings?
22. As far as you know, when was the plan actually last used?
23. How did the plan work?

Finally, in conclusion, just two more questions.

24. Can you tell me anything at all about the history of overall disaster planning in (X city)?

(IF YES,

PROBE:

- (a) sources of support and resistance? (local and otherwise)
- (b) nature of arguments for and against?
- (c) general public attitudes on disaster planning?

25. What experiences with disasters or other large scale community emergencies have you personally had?
26. What experiences with disasters or other large scale community emergencies has your organization had?
27. What experiences with disasters or other large scale community emergencies has (X city) had?

That's about it. Is there anything we have not covered that you think might be helpful to us in learning about disaster anticipation, disaster problems, disaster planning, or disaster preparations in (X city)?

What about any particular person(s) we should talk to who might be helpful along these lines?

THANK YOU

HAVE YOU CORRECTLY HANDLED PINK SHEET? (including identification on sheet)

GOTTEN BACK GREEN CARD?

GOTTEN BACK CANARY CARD?

HAVE YOU OBTAINED COPY OF DISASTER PLANS?

TABLE OF ORGANIZATION?

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

| REPORT DOCUMENTATION PAGE  |                       | READ INSTRUCTIONS<br>BEFORE COMPLETING FORM                      |
|--|-----------------------|--|
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| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)   |                       |  |
| 18. SUPPLEMENTARY NOTES  |                       |  |
| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number)<br><br>Disasters, Disaster Planning, Emergency Operating Centers (EOCs), Local Civil<br>Defense, Sociological Research, Field Studies, Organizations Under Stress   |                       |  |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number)<br><br>Under the general rubric of disaster studies and planning, the Disaster<br>Research Center (DRC) of the Ohio State University conducted a series of studies<br>for the Defense Civil Preparedness Agency (formerly the office of Civil Defense)<br>from 1972 through 1978 with most of the actual work being done during 1972-1975.<br>Three major pieces of work were undertaken:<br>(1) a study of the role of local civil defense in disaster planning;<br>(2) a study of the use of local Emergency Operating Centers (EOCs) in<br>disasters; |                       |  |

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(3) a study of the implementation of disaster planning.

Different sets of data and field operations were used to obtain information for the studies. For the first study most of the data was derived from research in 12 communities around the country. Data for the other two pieces of research was collected from 14 new field studies as well as by reexamining previously collected data in the DRC files.

In general, it was found that under appropriate circumstances local civil defense offices can play important roles in local community disaster planning. The value and importance of local EOCs in disasters was also confirmed although there are a number of problems associated with the use of such facilities. Finally, many of the conditions which facilitate the implementation of community disaster planning were ascertained.

The first chapter of the report outlines the objectives of the work undertaken. Chapter two summarizes the methodology used and the data obtained for each objective. In the third chapter, the research accomplishments are detailed with particular emphasis on research which had not been previously reported in earlier documents produced by the work. Some conclusions and recommendations are contained in chapter four. An appendix provides copies of some of the field instruments used.