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# A GUIDE FOR EMERGENCY EVACUATION MANAGEMENT AND OPERATIONS

FINAL REPORT

CONTRACT NO. DCPA01-79-C-0235

WORK UNIT 2312-H

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Final Report

# A GUIDE FOR EMERGENCY EVACUATION MANAGEMENT AND OPERATIONS

by:

A.E. Wilmore
R.A. Harker

for

Federal Emergency Management Agency
Washington, D.C. 20472
Contract No. DCPA01-79-C-0235
FEMA Work Unit 2312-H

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February, 1981
SYSTAN, Inc.

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This guide is to provide a set of procedures and options for local officials who may, because of crisis or disaster conditions, be required without prior planning or assistance to provide care and protection for people who leave their homes to relocate to a safer location. A research report "Emergency Evacuation Management Requirements and Concepts" has also been prepared under this contract.

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# 1. PURPOSE AND USE OF GUIDE

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## 1.1 PURPOSE OF GUIDE

The purpose of this guide is to provide a set of procedures and options for local officials who may, because of crisis or disaster conditions, be required without prior planning or assistance to provide care and protection for people who leave their homes to relocate to a safer location. This guide is intended to augment other emergency preparedness guidance. Its main value is to those communities that do not have evacuation plans for a major emergency. By following the anticipated events and chronology of actions suggested in this guide, local officials will be better prepared to initiate timely and appropriate emergency actions. Further guidance and planning assistance may be secured from state and federal emergency preparedness officials.

The movement of evacuees or relocatees under such conditions is referred to as emergency evacuation; jurisdictions moving people out are referred to as risk areas; those receiving relocatees are referred to as host areas. Many evacuation problems of coordination, management and operations apply equally to all types of emergencies (such as earthquakes, floods, fires, tornadoes, nuclear power plant accidents, or

war-caused disaster conditions) that necessitate the relocation of people from one area to another. Thus, this guidance may be applied to mitigate the effects of any disaster.

## 1.2 EMERGENCY PLANS

Nationwide, planners are working at all levels of government to develop plans for emergency evacuation of people in high risk areas and for their reception and care in host areas (communities capable of providing housing, food, water, public safety services, health and welfare assistance, and shelter from nuclear radiation). That planning is primarily concerned with crisis relocation of people faced with the possible hazards of nuclear war. Federal and state governments have divided communities according to high or low risk of attack and to their vulnerability to the hazardous effects of radiation fallout. (The authority for nuclear emergency preparedness is the Federal Civil Defense Act of 1950, Public Law 920, as amended. All states have implementing laws.) In addition, state and local governments are generally aware of the hazards associated with floods, earthquakes, fires, and other natural disasters.

Some communities have received state and federal assistance in developing emergency evacuation plans, and many more will receive such assistance in the future. However, it is anticipated that several years will be required before all communities benefit from direct planning assistance. For this reason, information is needed to span gaps where local governments are faced with the immediate problem of preparing to

evacuate cities, receive and care for relocatees, and, in the case of risk areas, provide care and protection for essential workers and others who cannot be evacuated. This guide is designed to fit that need.

Although this guide is intended primarily as a working document for local officials who may be charged with hosting relocatees from an area or areas at risk, it is also designed to identify and interrelate those matters of joint concern and responsibility between risk and host area governments. Matters related to host area reception and care operations are covered in Sections 14 through 18.

By their nature, the time, location, extent and severity (Section 2.2) of disaster impacts are uncertain. Many local jurisdictions have gained valuable emergency experience because of recurring similar disasters (hurricanes on the Gulf Coast and earthquakes in California). The federal/state designation of high versus low risk areas to nuclear attack is based on extensive analyses of vulnerability and enemy strategic capabilities. Nevertheless, local jurisdictions face uncertain disaster contingencies. Past experience and future predictions may have designated a jurisdiction as a high risk area, with emergency planning designed for effective population shelter or evacuation. A specific, unanticipated disaster might suddenly change the role of the jurisdiction to a reception host area. Similarly, jurisdictions designated as host areas may become risk areas. This guide will also fit those conditions.

## 1.3 USE OF GUIDE

It is recognized that no single best procedure can be defined because of the variability of circumstances, characteristics, and geographic differences encountered in host area operations. No guidance can replace the professional judgement and local knowledge in determining how best to react to the realities of a disaster.

The guide is written in general and universal terms. "City" and "county" may locally be "parish," "township" or "borough." "Sheriff" may be "police chief," etc. Nor is the guide a universal checklist for all agency operations under all emergency relocation conditions; rather, it is a statement of essential operational requirements, divided into sections according to generic function. Only the individuals responsible for operations can generate checklists of activities -- who does what, when, where, and with what resources.

This guide is divided into many short sections; the language is terse; explanations and examples are brief. Exhibits are included at the end of each section. The guide has been designed to serve local officials who may suddenly find themselves required to provide for evacuees from a disaster area, or for those residents who may be displaced due to a disaster or the threat of a disaster. Should such an unfortunate event occur, it is suggested that a responsible individual scan the contents of this guide. With this individual's knowledge of his or her jurisdiction and of the disaster itself, appropriate sections of this guide should be selected, divided, reproduced and distributed to operating officials. Some redundant information is included in several sections to make them individually more self-sufficient.

This guidance is in loose-leaf form to ease detaching and using specific sections. A "blue pencil" will be useful in adapting these materials to the jurisdiction and the immediate problem. The guide is double-spaced, with wide margins to facilitate editing. For most disasters, the guide is an "overkill": the measures are responsive to extreme conditions. Some sections are general discussions; others are directed toward specific operations. Inclusion of the general material is at the option of the responsible official.

Because of the basic responsibilities associated with emergency evacuation concepts and procedures and the fact that the execution of any directed evacuation of populations at risk will be managed by government officials at the Federal, State and local levels, the information contained in this Guide is directed primarily to such officials. However, while government officials are expected to meet their constitutional responsibilities, and public employees will be fully utilized in the execution and conduct of any emergency evacuation, it should be recognized that volunteer assistance in many areas of operations will be an invaluable resource. Historically volunteers have made contributions of inestimatable value in most major crisis situations. Effective utilization of volunteers must be a major factor in a crisis relocation emergency. (See Section 9.4)

# 2. EMERGENCY EVACUATION CONDITIONS


| | |
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## 2.1 EMERGENCY PLANNING

Emergency operations planning has been accomplished in varying degrees in almost all communities in the nation. Many communities have experience with emergencies, and are well prepared for moderate-level disasters. Thus, procedures exist in most local governments to conduct operations during an emergency. However, the relocation of people from an area at risk to one of lesser risk may add a new dimension for many local governments to consider; this should be examined both independently and in conjunction with other plans.

It is recognized that most local officials are primarily (and properly) concerned with normal day-to-day operating responsibilities. Few have time to anticipate the contingencies of unlikely events. This is especially true for war-related crises or damage effects. Much of this guide focuses on nuclear problems because (1) there is a current, major, nationwide planning activity, (2) they are the basis for many local plans and much legislation, and (3) they often represent "worst-case" conditions due to their nationwide extent, extreme levels of destruction, and uncertain duration. Thus, the procedures and

options of the guide represent extreme measures that can be modified for less extreme hazard conditions.

A significant number of local governments have completed Community Shelter Plans, which provide fallout shelter protection for the residents of their area. However, emergency evacuation may involve the movement of large numbers of people from urban areas at risk to smaller, rural communities. This may create a larger relocatee population than the resident population, and a probable shortage of supplies and shelter. Research to date suggests that there are generally sufficient facilities to host two to three relocatees for each host area resident. (This hosting ratio applies to all types of support, not just fallout shelter space.) Risk areas are generally expected to be capable of housing, feeding, and sheltering those people remaining in the area. In addition, risk areas are more likely to have current Community Shelter Plans.

In locations with Community Shelter Plans, basic data regarding fallout shelter facilities have been developed and, where practical, should be used in preparing for the reception and care of relocatees. Where shelter data have not been developed, efforts should be made to secure it through emergency preparedness channels. If unavailable through regular channels, it can be approximated by personnel with knowledge of city buildings and other protective facilities (caves, mines, etc.). These data are essential to the preparation of all types of hosting plans.

Military support to civil government is available, and has been frequently rendered for natural disaster operations. Military assistance is also provided for by federal directives for nuclear emergencies (subject to military mission requirements). This support is available to local jurisdictions through their state governments.

## 2.2 DISASTER CHARACTERISTICS

Because of the importance of warning time to the effectiveness of protective measures, warning time has become a common classification unit. Earthquakes and fires are classified as occurring without warning, floods and hurricanes as with warning. These "go/no go" classifications are of limited use in emergency evacuation operations. The classifications in Exhibit 2.1 are tailored to the requirements of this guide. Nuclear emergencies (such as power plant or logistical system accidents and war crisis or attack) differ from other hazards in the nature and extent of their effects.

For disasters classified as preceded by warning, it is assumed that adequate time will be available to allow evacuation (or another countermeasure) to take place before the most serious impacts of the hazard are felt. It is also assumed that the nature of the warning is sufficiently definitive that high risk and low risk geographical areas can be distinguished, and that adequate detection, identification and dissemination systems are available. These qualities will not necessarily make it easier to predict the severity or extent of the impacts, their duration, or the secondary effects of the disaster. (Typically, longer disaster warning periods generate greater uncertainty in local jurisdictions.)

All disasters have potentially catastrophic impacts on their immediate victims. Exhibit 2.1 focuses on the number of victims and the geographical extent relative to typical countermeasures. "Moderate" indicates that the disaster is confined to a jurisdiction (or several adjacent jurisdictions), and that local forces (supplemented by limited outside resources) can adequately mitigate the effects. "Areawide" indicates more widely dispersed effects (metropolitan area, statewide, etc.), requiring significant levels of outside support. "Regional" extends both the affected area and the level of support required. "National" means that all regions of the nation may be affected, and that all essential resources will be involved. These differences are relevant to host area officials to estimate the availability of outside assistance.

The duration of a disaster includes not only the length of time that the impacts of the hazard are felt, but also the time needed for the effects to subside to the degree that recovery and restoration operations can begin. Mitigating operations may be conducted during the disaster impact period (e.g., levees may be reinforced during a flood). "Short" is defined as 48 hours or less; "intermediate" extends from two days to one week or ten days; and "indeterminate" means that the disaster effects may last for an indefinite period, requiring an extended period of emergency operations. The longer the duration, the greater the need for local officials to establish and maintain flexible reserve forces and resources.

All disasters tend to increase a community's vulnerability to secondary or follow-on related disasters. Effects of related disasters vary in intensity, extent and duration, as do those of the primary hazard. Related (secondary) disasters are likely to affect operations (as noted in Exhibit 2.1) by greatly increased demands on emergency services.

A final significant characteristic to distinguish between disasters is the frequency with which they occur, which allows emergency organizations to gain experience with effects and countermeasures. At the national level, experience is available for all types of disasters except epidemics (in recent history), nuclear materials accidents, terrorist activities involving nuclear materials, and nuclear war crisis relocation. Because of the unique nature of the subject, however, most local officials have limited experience with most types of disasters. This guide is directed primarily to officials without evacuation experience and without formal plans for the reception and care of emergency evacuees.

As with many classification systems (Exhibit 2.1), special conditions and exceptions arise. Forest fires and the Southern California fires during the Santa Ana windstorms may be areawide and of intermediate duration. Many disasters classified as with warning can be unwarned events because of detection system failures (landslides, dam failures, volcanic eruptions, or nuclear power plant failures). In the case of the Los Angeles fires, it may be questioned whether the combination of large fuel loads and hot, dry, windy weather provides

warning (there is a high correlation and a sophisticated response system). Obviously, the impacts of any incident can differ widely in severity, so local officials must exercise their judgement as to the appropriate level of response.

In the case of a nuclear war threat, the existence of weapons of mass destruction and their delivery systems make it incumbent on local government to recognize that emergency countermeasures may be necessary for the protection of citizens. National civil defense policy recognizes the strategic nuclear threat as primary; however, it does not rule out the possibility of attack effects related to chemical, biological, or conventional weapons, nor does it rule out nuclear materials accidents or terrorists employing nuclear weapons. It recognizes a national fallout shelter system as essential to civil defense and war emergency preparedness. The rationale for crisis relocation includes the following points:

- USSR civil defense plans provide for evacuation of population from urban centers and the dispersal of people in other areas. Should the Soviets commence evacuation during a crisis, it would be desirable for the United States to have a similar capability to forestall Soviet attempts to intimidate us or to gain a significant imbalance in strategic vulnerability.
- Research and experience with hurricanes and toxic material releases indicates that large scale population relocation and care are feasible. Each state, in coordination with the federal government and affected political subdivisions, is developing the capacity to relocate population from likely target areas, and to provide for care and protection elsewhere.
- Crisis relocation may be the only opportunity for survival for millions of people in the event of a nuclear war. Those communities that will serve as host areas have a great responsibility both to their own people and to relocatees. Once implemented, crisis relocation may be in effect for an indefinite period.

The classifications in Exhibit 2.1 serve the goals of this guide by establishing typical degrees of hazards and countermeasures, and providing a convenient short-hand reference system. Consideration of the hazard classifications reinforces the concept of uncertainty for emergency response systems. Disasters are destabilizing forces; any disaster combination may escalate in severity and area; most local disasters produce environments prone to related, secondary disasters; and simultaneous disasters may balloon the cumulative hazard levels and areas.

## 2.3 LEGAL AND FISCAL

Local governments are responsible for providing movement plans and reception, care, and protection of relocated and resident populations until a declared emergency has ended. They should also assist in the overall continuity of government activities, essential industry operation, and other priority services.

It is assumed that state law authorizes the governor and the executive heads of government in the political subdivisions to exercise substantially the same emergency powers in an emergency evacuation that are currently authorized as war emergency powers. If such legislation has not been enacted, emergency powers enumerated in existing laws and ordinances should be invoked.

State and federal governments establish, promulgate and carry out the necessary resource mobilization, economic support, and stabilization policies to effect both crisis relocation and local disaster operations.

Local governments implement the policies. It is assumed that no one will be denied the necessities of life because of inability to pay. Further, it is assumed the expenses incurred by businesses, governments and other institutions preparing for and implementing evacuation will be financially redressed through a variety of federal actions. [While no policy has been enunciated, it is believed that in the real case any federal proclamation requiring evacuation, would also address such topics as fiscal liability/responsibility, public use of private assets, and use of government employees outside of their home jurisdiction.] However, it is unlikely that specific state and federal policies will be announced prior to evacuation, so local officials may be required to conduct initial operations according to their own judgements.

Emergency evacuation may result from warning of impending crisis or disaster, or in response to disaster effects. Evacuation may be directed by the President, state governors, or local officials. It is widely agreed that it is not feasible to require individuals to relocate. Voluntary or spontaneous relocation by individuals or small groups is possible because of prudence, fear or anxiety. Evacuees might locate with friends, relatives or church or fraternal groups. Local government officials may well be unaware of such evacuation for a period of time. This type of evacuation could be based on general news media information, official intelligence data, or steps taken by federal or state officials to strengthen emergency plans. Whatever the basis for evacuation, local officials might have significant time to review or prepare for management and operations. The most important consideration in a crisis is that local officials in both the host and risk

jurisdictions provide necessary leadership by reacting quickly and decisively to the realities of the situation.

## 2.4 ESSENTIAL ELEMENTS

The essential elements of emergency evacuation management and operations are set forth in Sections 3 through 9. Each section is in sufficient detail to assist local officials and planners either in a pre-emergency crisis preparation period or under an actual emergency condition. Each section will serve as hasty checklists or reminders to operating officials of those areas for which they are responsible. Parts of these guidelines may repeat guidance contained in existing emergency plans. Theoretically, except for the new dimension added by emergency evacuation, all elements of emergency planning within a local government should be compatible and mutually supportive.

So this guide can best serve its intended purpose of providing local officials and planners with information and data that will assist them to provide care, protection and support to both relocated and resident populations, the various essential elements are presented in considerable detail. However, there is no substitute for the knowledge and inherent instincts of local officials as to what procedures or planning approaches best suit their community. Therefore, these guidelines should not be considered as rigid or prescriptive, or the only way to proceed in a certain area at a given time. Flexibility, good judgement, creativity and personal knowledge of local situations and conditions will complement and strengthen these guidelines.

## 2.5 RISK AREA OPERATIONS

A primary risk area government function is to aid the orderly exodus of population. To the degree feasible, risk area operations, resources and emergency personnel should be moved to host areas along with the general populus. However, certain selected risk area activities, conducted concurrently with host area operations during a disaster, will be crucial to protect property, to maintain industry and to supply the relocated population. Activities carried on in the risk area during the relocation period are of two kinds: (1) risk area operations, and (2) risk area support. Risk area support consists mainly of governmental activities to preserve resources and to maintain readiness in the event that the crisis should culminate in disaster.

Risk area operations are essential activities that may be undertaken at fixed facilities in the risk area during the relocation period. These operations may be divided into three categories. The first category consists of those activities carried on at industrial and business facilities (e.g., food processing and distribution facilities, defense plants, refineries, bank computer sites). These operations may be regarded as the primary operations. The second category consists of those activities carried on at residential facilities (e.g., hospitals, correctional institutions, and other special care facilities having inmates or patients that cannot be moved to the host areas). The third category of risk area operations consists of service activities (e.g., electric power, gas, water, and sewage disposal). These service activities are usually carried on in what would be regarded as

industrial facilities, but, for the most part, they are needed to enable the other risk area operations to continue. Therefore, they may be regarded as secondary operations.

The basic concept of concurrent/continued risk area operations is that the minimum activities necessary or appropriate to the crisis situation will be maintained by the essential work force commuting from nearby host areas, where the workers are housed, fed, and sheltered with their families while off duty. This policy is intended to keep the number of people in the risk area at any one time to a minimum during an emergency evacuation. The policy may be relaxed by the state or higher authorities under some crisis circumstances, to permit essential workers (and perhaps their dependents) to remain in the risk area during off duty hours, possibly in their own residences. The basic plan, however, should assume that all risk area workers return to the host area at the completion of the work shift. To further minimize the numbers of people in the risk area and to ease commuting requirements, facilities in the risk area should be operated on a two-shift basis, each of 12-hours duration for round-the-clock operations.

In the event of an impending enemy attack, arrangements should be made to provide blast resistant shelter and emergency evacuation measures for the on duty workers, should the attack occur. For peacetime disasters, provisions should be made for the protection of risk area workers against toxic materials, exposure to fire, building collapse and other possible hazards. Organizations engaged in risk area operations should be expected to provide personnel for protection

assignments at the work site in addition to those required for essential operations.

Risk area operations and support should be directed and controlled by local officials normally responsible (Sections 3 through 13). Two kinds of support facilities should be established in the risk area. The first are Staging Areas located in the vicinity of clusters of operating facilities. Staging Areas provide on-shift feeding, emergency medical care, vehicle refueling, emergency repair capabilities, and generalized support to risk area operations. The Staging Area direction and control unit will function as a subordinate command center, and will serve as Shelter Complex Headquarters in the event of a widespread disaster.

The second set of support facilities should be Access Control Points located on principal highways at the edge of the risk area. These control points limit access to the risk area to authorized traffic, provide route guidance and vehicle parking to trucks delivering to risk area facilities and outbound to the host areas, provide a base for public safety forces in addition to the Staging Areas, and, when needed, clear inbound traffic from the roads. Control Points should also be subordinate command centers for direction and control.

Risk area operations can be categorized as uninterruptible or interruptible. Operations at resident facilities and secondary operations (services) are uninterruptible. Primary operations are interruptible, except where shutdown is time consuming, dangerous, or costly. Oil refining and steel production are not interruptible because of shutdown times and costs. In the case of interruptible operations,

the general procedure should be to shut down operations during the mobilization period or upon the Governor's announcement directing relocation, to complete preparations on the part of employees and management to relocate, and to relocate during the assigned period of time after the Governor's announcement. The first shift to resume operations would commute back to the risk area after the exodus was essentially complete (generally on the third or fourth day after relocation was directed). This procedure avoids complicating the relocation movement by unnecessary risk area traffic to maintain operations, by truck traffic making deliveries, and by simultaneous commuting traffic from the host areas.

Uninterruptible operations are maintained initially by the commuting of essential employees from their place of residence. Other employees and their dependents prepare for relocation during the assigned period. Adjustment to emergency shift schedules are made at this time. Non-essential employees and dependents will relocate during the assigned period. The shift on duty during the assigned period will relocate with their dependents after completion of the shift, will rest in the host area, and will commute to relieve the second shift, which then returns home and prepares to relocate. Depending on the timing of the directed relocation, the second shift may arrive at relocation headquarters up to a day after the non-essential employees have relocated. This procedure also minimizes conflict with the main exodus.

As emphasized elsewhere in this guide, it is essential that a close coordination be in effect between risk and host area officials. Where

pre-planning has not been accomplished prior to a heightened crisis situation, a timely effort by officials from each area is essential to successful operations. Primary attention has been devoted to host area operations, but the basic concept of continuing operations in risk areas concurrent with host area operations should also be understood.

EXHIBIT 2.1

CLASSIFICATION OF DISASTERS

CLASS I: No warning, moderate impact, short duration.

| | |
|---|---|
| Fire | Transportation accident |
| Flash flood | Terrorist incident |
| Explosion | |

CLASS II: No warning, areawide impact, intermediate duration, with related effects of fire or pollution.

| | |
|---|---|
| Earthquake | Hazardous materials |

CLASS III: Warning, moderate impact, short duration, with related effects of floods or fires.

| | |
|---|---|
| Tsunami | Landslide |
| Tornado | Dam failure |
| Civil disorder/riot | |

CLASS IV: Warning, areawide impact, intermediate duration.

| | |
|---|---|
| Epidemic | Flood |
| Pollution episode | |

CLASS V: Warning, regional impact, intermediate duration, with related effects of flood, pollution, and epidemic.

Hurricane/storm
Volcanic eruption
(may be Class VI)

CLASS VI: Warning, regional impact, indeterminate duration, with related effects of fires, radioactive fallout.

Nuclear materials accident
Terrorist incident
(nuclear weapon)

CLASS VII: Warning, national impact, indeterminate duration, catastrophic related effects.

Nuclear war crisis

# 3. DIRECTION AND CONTROL: ORGANIZATION AND FUNCTIONS


| | |
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| 3.2 FUNCTIONS | Page 3-1 |
| 3.3 COORDINATION | Page 3-2 |
| 3.4 TIME PHASES | Page 3-3 |


## 3.1 MISSION

The purpose of this section of the guide is to define and explain the various activities of direction and control (D&C) as they apply to operations during the pre evacuation, movement and maintenance time phases. Limited attention is given to the in place shelter and post-disaster phases. In addition, the concept of continued risk area operations (see Section 2.5) and Direction and Control functions and organization are sufficiently similar in scope as to not require a separate chapter or section for explanatory purposes.

## 3.2 FUNCTIONS

The basic responsibilities of direction and control during an emergency evacuation are to:

- Assign missions and tasks, direct and coordinate planning, inform the public, and control emergency operations;
- Ensure equitable allocation and distribution of services and supplies to sustain and protect residents and relocatees within the host area; and
- Minimize disruption of the local economy and ensure continuity of government.

Various approaches to the problems of direction and control may be useful in preparing for evacuation operations. A basic assumption is that emergency planning has been accomplished to some degree in the community. It is further assumed that an emergency operating center (EOC), or a headquarters facility for emergency operations, has been established. A central location, hopefully providing communications and protection from the effects of the emergency, is necessary for coordinated management of the following direction and control functions:

1. Emergency operations control;
2. Warning of emergency;
3. Radiological defense (RADEF);
4. Emergency public information;
5. Government/industry coordination; and
6. Training.

These functions are considered to be of primary concern to management officials. Although the functions of warning, RADEF and emergency public information fall within the overall area of emergency operations control, they are of sufficient importance to be considered individually in Sections 5, 6 and 7 of this guide.

## 3.3 COORDINATION

Because of the complexities of emergency evacuation operations, it is important that working relationships exist between host area, risk area and state officials. They may exist on a day-to-day pre-emergency basis; if not, the earlier they can be established in a crisis situation

the greater the possibility of successful coordinated operations. Risk area support to host areas may be critical for law enforcement, fire protection, medical and health services, and distribution of supplies. An early and continuing liaison, instituted under normal pre-disaster operations, is ideal and will contribute materially to better direction and control.

Severe disaster conditions (Classes V, VI, and VII of Exhibit 2.1) may impose heavy demands for coordinated activities among the risk and host jurisdictions, state and federal agencies, and essential private industries of the disaster area. Existing management organizations, decision structures and communications systems may be dispersed and disrupted. Such conditions would aggravate (especially for continuing resource and supply, sections 19 through 26) already difficult operating problems. Consideration should be given to establishing a disaster area coordinating center, manned by key personnel of essential agencies and local organizations, which could serve as a clearing house for difficult decisions of resource and personnel allocations.

## 3.4 TIME PHASES

To accomplish the emergency missions, various activities will need to be performed on a time phased basis. Pre-evacuation assumes some significant time period before the evacuation movement begins. Lacking this time, the actions should be taken during the early part of the movement phase. In place shelter phases are included to cover those disasters involving radiation hazards from nuclear material fallout.

Movement operations to in place shelters are limited because time and distance is short. In place shelter operations are also restricted because the population and emergency organizations are largely immobile. Return of evacuees and post-hazard restoration are determined by disaster damage; they are not treated in this report. This guide primarily concerns short-term pre evacuation, movement and maintenance operations.

| Phase | Actions |
|---|---|
| Pre Evacuation | Emergency evacuation plans, preparatory actions, and force deployment. |
| Movement | Movement of relocatees from risk areas to host areas. |
| Maintenance | Reception and care sustaining operations. |
| Impact Warning | Movement to fallout shelters. |
| In Place Shelter | Provide services both in and outside of shelters, depending on status of radioactive fallout. |
| Post Disaster | Return of evacuees and restoration of facilities and services. |

# 4. EMERGENCY OPERATIONS CONTROL


| | |
|---|---|
| 4.1 COORDINATION OF OPERATIONS | Page 4-1 |
| 4.2 EOC OPERATIONS | Page 4-4 |
| 4.3 EOC ADMINISTRATION | Page 4-4 |
| 4.4 EMERGENCY SERVICES | Page 4-5 |


## 4.1 COORDINATION OF OPERATIONS

An emergency evacuation, resulting from a major crisis or disaster, requires top level central government officials (supervisors and county and city managers and mayors) to assume overall coordination of operations to move people from risk areas and to provide reception and care for the evacuees and support services for both evacuees and residents. Although state, federal and major private organizations will theoretically be responsible for supporting evacuation operations, risk and host officials may well find themselves in "the buck stops here" position. Many operating decisions, normally handled routinely by middle managers and dispatchers of areawide organizations, may devolve to host area officials because normal headquarter facilities, resources, and personnel may be relocated to alternative sites (Section 3.3).

Within host jurisdictions, operating agencies will be faced with increased demands, disrupted (or saturated) communication lines and distribution systems, and unfamiliar problems. Prudent local executives will be well advised to prepare to control emergency evacuation operations within their jurisdiction on a self help, flexible mode with

resources and personnel under their direct control. In addition to responsibility for the reception and care of evacuees, this caution applies to resource allocation, coordination and support operations.

There is a range of opinions concerning the best way to effect the coordination necessary for the decisionmaking control involved in large scale disasters. At one extreme is the position that all activities (including dispatching) should be brought together into a single facility. In part, this approach can be explained by years of planning for operations in a nuclear attack environment in which an EOC could provide protection against fallout and possibly against blast and other weapons effects. This attitude may also partially stem from the desire of some civil preparedness personnel to aggrandize their authority in an emergency. At the other extreme, many officials intend to conduct all operations from separate agency headquarters outside of the EOC, except those specifically assigned by the highest authorities. This position may come from recognition that the efficiency and effectiveness of operations will diminish if they are directed without adequate intelligence and communications available only by resources and logistic support at organization headquarters. This position may also result from a lack of willingness of many agencies to subordinate their emergency operations to other organizations, or from lack of experience with situations requiring protected operations.

Examination of these extremes, and various intermediate positions, has led to the conclusion that during emergency evacuation considerations of efficiency and effectiveness of operations should

prevail. In most cases, operations should be directed and controlled from agency and organization headquarters. Coordination between organizations, and with central government, can be accomplished better by telecommunications and periodic meetings than by combination of top-level personnel in a single facility with crowded space, limited communications, and inadequate backup resources. During the pre evacuation, movement, and maintenance phases, protection from hazard effects are not required. Should in place shelter be required, essential operations agencies may be able to protect their headquarter sites, or agency officials could move to the EOC. Under extremely threatening conditions, most outside operations would be suspended until the danger subsided to acceptable levels. (These questions, obviously are not relevant where all agencies are housed at a single facility (e.g., a county courthouse).

Should the jurisdiction have an EOC or other protected facility, it could be used by central government officials during all phases of the emergency. Primary criteria for selection of this headquarters site should be availability of communications and logistic support, and adaptability for physical security and hazard protection. For ease of reference, the term "EOC" will be used in these guidelines for the central government headquarters site.

## 4.2 EOC OPERATIONS

- Pre Evacuation Phase. The EOC need not be fully operational, but certain internal readiness actions are helpful to prepare for the reception and care of relocatees. Except for those actions relating specifically to emergency evacuation, it is expected that basic emergency operations plans will be followed in establishing an operating capability. Emergency actions oriented toward evacuation should relate to information and advice received concerning the evacuation of risk areas, and as detailed in this guide.

- Movement and Maintenance Phases. The EOC should be fully activated and operational until all relocatees are processed, lodged, arranged feeding, and assigned shelter (if applicable). Once all relocatees are settled in the host area, the EOC may operate at reduced strength and hours of operation as established by the chief executive, but with EOC staff on call.

- In Place Shelter Phase. If a nuclear emergency occurs, the EOC should be fully operational, and may house operating officials.

## 4.3 EOC ADMINISTRATION

- Internal operations should be supervised by County Chief Administrative Officers or by City Managers. Principal administrative activities include: (1) housekeeping; (2) personnel supervision; and (3) operation of message center.

- Staff and technical support to the chief executive should be supervised by the person designated in emergency plans of each jurisdiction. This will usually be the director of operations. The functions to be performed include:

  1) Communications;

  2) Warning;

  3) Emergency public information;

  4) Intelligence and assessment; and

  5) Radiological defense (RADEF).

## 4.4 EMERGENCY SERVICES

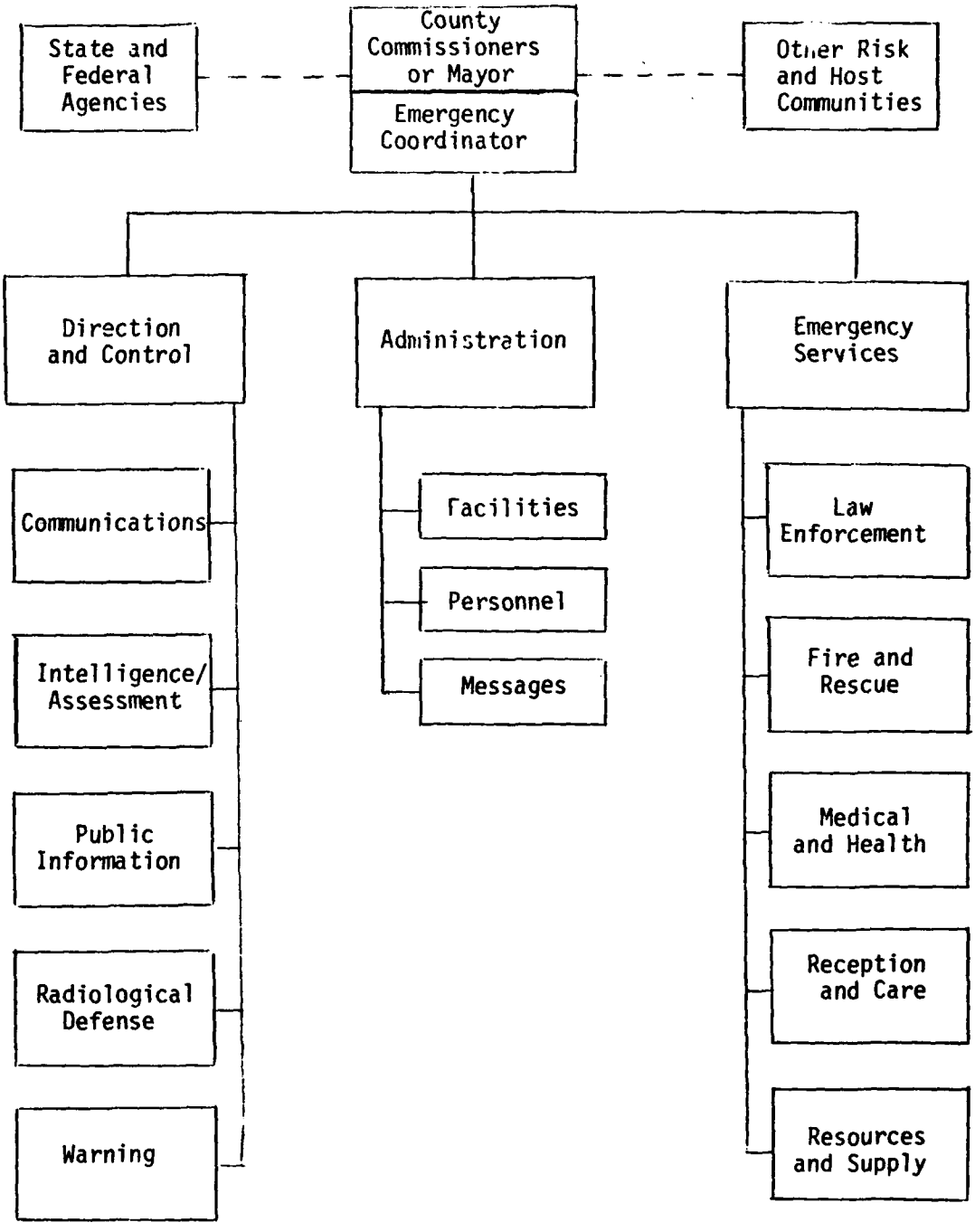
Coordination of law enforcement, fire, medical and health, reception and care, and resources (supply, transportation and shelter) services should be provided to the EOC by the director of operations.

Exhibit 4.1 is an organizational chart that could be used by either a county or municipal government as a basis for emergency evacuation organization. The coordination with state and federal agencies and representatives of other risk and host communities should be structured to meet local needs. For severe disaster conditions, as suggested in section 3.3, a centralized disaster coordinating group may be essential.

EXHIBIT 4.1

REPRESENTATIVE ORGANIZATION

FOR EMERGENCY EVACUATION DIRECTION AND CONTROL



# 5. WARNING (DECLARATION OF EMERGENCY EVACUATION)


| | |
|---|---|
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| 5.2 PRE EVACUATION PHASE | Page 5-2 |
| 5.3 MOVEMENT PHASE | Page 5-4 |
| 5.4 IN PLACE SHELTER PHASE | Page 5-4 |
| 5.5 POST DISASTER PHASE | page 5-4 |


## 5.1 DISSEMINATION OF WARNING

Warning is the U.S. Government's method of communicating "alert," "attack," and "all clear" information to the various elements of the federal government and to state and local governments in the case of a war-caused crisis or attack. This information is transmitted from the National Warning Center at Colorado Springs over the National Warning System (NAWAS). Each state has warning procedures in effect which provide for the further dissemination of warning throughout the state. Many counties and communities are tied to this warning system, and have their own individual systems for dissemination to the public. The emergency broadcast system (EBS) is an extension of the Federal Warning System, and uses selected radio stations to provide essential information to the general public.

In addition to NAWAS and EBS, various other systems and capabilities exist for warning and informing the public about natural and man-made disasters. The National Weather Service is responsible for issuing warnings about hurricanes, tornadoes and winter storms. The

National Oceanic and Atmospheric Administration is responsible for issuing flood and flashflood warnings through a series of River Forecast Centers and River District Offices. Some cities have prearranged siren signals to warn of flash floods, terrorist acts, chemical spills, nuclear reactor accidents, etc. Some states have extensive communications capability, such as California's microwave system, which can disseminate warning information. Earthquake reporting systems exist in vulnerable locations, and technological advances are generating valuable improvements in reporting earthquakes and tsunamis.

## 5.2 PRE EVACUATION PHASE

Prior to receipt of any form of official warning, local officials and residents may become aware of the increased possibility of a crisis or disaster situation through the news media. Information may flow through official federal, state or county channels, advising of an emergency situation but not directing any specific preparatory actions. Local officials may be advised to review or devise emergency preparedness plans and update them as appropriate in anticipation of an emergency. It is especially important that an internal warning capability or system can be implemented quickly, which will reach all risk area residents and host area relocatees and residents. It is equally important that the capacity exists to reach officials and staff with emergency responsibilities.

An "alert" or declaration that crisis or disaster emergency evacuation is to be implemented will probably be by telephone from the

Governor (or his director of emergency services), through county officials. Where local emergency plans do not provide a system of notifying officials in the chain of command, a list of those to be notified should be drafted and implemented expeditiously. A responsible individual assigned to the Board of Supervisors or a Mayor's office should be delegated the responsibility of notifying elected officials and the local director of emergency services. The director of emergency services will alert police, fire, health, utility and other emergency service officials of the situation, and maintain a continuing liaison to keep them informed.

A declared state of emergency enables county, city and town governments under their own emergency powers to enact emergency legislation and declare a state of emergency. A declared state of emergency permits the set-aside of normal governmental activities in deference to the emergency. This gives government the authority required to assure control of the situation. The declaration should be issued on receipt of the Governor's alert and followed by additional declarations as needed. Exhibit 5.1 represents a sample declaration that may be used by local government by inserting the appropriate names or terms in the blank spaces to fit the governmental body concerned.

The county or city officials should also release a message through the major local radio and television stations alerting the general public that emergency evacuation is imminent and that the community will soon be receiving relocatees. Exhibit 5.2 is a suggested release. The radio/television release should be followed immediately by a special

news supplement, which will provide detailed information for both residents and relocatees. This information should include, if possible, the anticipated duration of the evacuation Exhibit 5.3 is a suggested news supplement.

## 5.3 MOVEMENT PHASE

Information that relocation has begun will be received in host areas by telephone or radio from officials in the risk area. Time of arrival of relocatees at traffic control points (Section 11, Law Enforcement) entering the county and city should be relayed to direction and control officials.

## 5.4 IN PLACE SHELTER PHASE

The relocatee and resident population may be required to take shelter from radiological fallout. If this results from a nuclear accident, warning would probably come from federal or state officials. A nuclear war would be announced by an "attack" notification over the NAWAS system.

## 5.5 POST DISASTER PHASE

Notification of the end of the emergency evacuation for natural disasters will be made by state or local officials. The notification should be made only after coordination with all affected agencies and services, and should be time sequenced. For war-caused evacuations, an "all clear" will be issued over the NAWAS once the President has

determined that the threat of attack or an actual attack has terminated and that it is safe for people to emerge from shelters and return to their homes. If risk areas have been severely damaged and remain hazardous, host areas may be required to continue providing care for relocatees for an indefinite period or until a liveable environment has been achieved.

EXHIBIT 5.1

LOCAL EMERGENCY PROCLAMATION

(Sample)

WHEREAS an international crisis has developed of such intensity as to potentially place American lives at risk; and

WHEREAS the President has directed and the Governor has alerted this government of his intent to order the relocation of the residents of the Risk Area; and

WHEREAS County and its incorporated cities and towns are to be used to receive and care for a proportionate share of the relocated populace; and

WHEREAS the
(Chairman, Board of Supervisors) of ( County) is
(Mayor) (Town of )
(Mayor) (City of )
(Mayor) (Town of )

authorized by proclamation to declare a local emergency;

NOW, THEREFORE, it is hereby declared that an emergency now exists throughout ( County) and
(Town of )
(City of )
(Town of )

IT IS FURTHER DECLARED AND ORDERED that during the existence of said emergency, the functions and duties of the Director of Emergency Services and the Emergency Services Organization of ( County) shall be those
(Town of )
(City of )
(Town of )

prescribed by the approved Emergency Evacuation Plan of the County of in order to mitigate the effects of said emergency.

Dated:

Chairman, Board of Supervisors, County of or
Mayor, Town of
Mayor, City of
Mayor, Town of

_____

ATTEST:

_____

EXHIBIT 5.2

INFORMATION FOR HOST AREA RESIDENTS AT ALERT PHASE

(Radio or TV copy in English and other languages as needed)

---

EMERGENCY EVACTUATION INFORMATION

(date) SPECIAL NEWS SUPPLEMENT (city)

---

IMPORTANT INFORMATION

RISK AREA RESIDENTS WILL ARRIVE SOON! Because a serious disaster crisis exists, the President has directed that a planned relocation of people will take place throughout the United States. The Governor of _____ has directed that there will be an immediate relocation of residents of the _____ risk area. About _____ people will move into _____ County, _____, _____, _____ and _____ Counties will also receive relocatees. Certain inconveniences will occur during this emergency and your normal routine will be disrupted.

DO YOUR UTMOST TO BE NEIGHBORLY AND WELCOME THESE PEOPLE.

VOLUNTEER LODGING NEEDED - by accomodating relocatees in your home you can provide a valuable public service to support the crisis effort and contribute to solving the local need. If you have not already volunteered to accept relocatees into your home and have the capability, please call _____ and specify how many you can accomodate. Every effort will be made to provide relocatees with comfortable surroundings during the emergency and your help is needed.

BE TOLERANT AND FRIENDLY - it will help relieve tension. Remember, we are all in this situation together, striving to help our Nation, State and community retain our democratic principles. Tolerance, help and cooperation are a vital part of our total effort for our future success. SUPPORT THIS EFFORT.

PLANS HAVE BEEN DEVELOPED AND ARE BEING IMPLEMENTED TO COPE WITH THIS EMERGENCY.

DON'T SPREAD RUMORS AND GOSSIP - don't repeat rumors, but try to obtain facts. Your radio, TV and newspapers will keep you informed.

ENTERTAINMENT AND RECREATION - announcements will be made by radio, newspapers and TV of schedules of organized entertainment and recreation activities including radio and TV programs.

FEEDING FACILITIES - restaurants, churches, schools and other

non-residential facilities with a kitchen and dining area will be used for mass-feeding relocatees.

FALLOUT SHELTER - sufficient fallout shelter spaces will be provided in _____ County for all residents and relocatees. If you wish to use fallout shelter at home for your family and NOT use public fallout shelter, then start IMMEDIATELY to develop expedient shelter. See _____ the Special News Supplement published by local newspapers for shelter information. Residents will be provided shelter in existing qualified facilities or upgraded buildings. Most relocatees will be sheltered in upgraded buildings. Upgrading will be accomplished by using earth-moving equipment to pile dirt on and by construction. Plans exist for this purpose and volunteers may be needed to assist in the work.

GENERAL SERVICES AND SUPPLIES - no problems are anticipated in meeting the basic needs of residents and relocatees concerning food, power, heat, pharmaceuticals, water and sanitation (sewage, solid waste, trash removal and pest control) requirements. You will need to obtain special authorization to purchase gasoline for private vehicles IF THEY ARE NEEDED FOR OFFICIAL USE OR A VALID EMERGENCY. It is necessary to keep traffic to a minimum during the emergency. This information will be disseminated by local officials over the radio and in newspapers. Residents are advised to obtain food items; however, your local government will not permit hoarding. Purchase only the amount of food to meet your basic needs for a two-week period. Food will be shipped to County retail outlets for distribution.

GROCERY AND PHARMACY NEEDS - to meet your needs during the relocation period, grocery stores and pharmacies will be open. If it is possible for you to walk to these facilities, do so. If you need to go by car, you may be stopped by the Police to justify that your driving is necessary. Hours of operation of these facilities will be furnished by the news media.

MEDICAL FACILITIES - our local medical facilities are being augmented by personnel from the risk area. If you have an emergency medical need, please call your family physician. But, remember, ONLY EMERGENCY NEEDS CAN BE TREATED, because of the additional workload on local medical facilities and personnel. If you have to take a member of your family to your doctor or hospital, you may use your car, but REMEMBER THAT THIS IS ONLY FOR A PERSONAL MEDICAL EMERGENCY. Medical facilities, such as clinics, doctor's and dentist's offices and pharmacies will be available for emergencies only. Local news sources will identify their location and schedule.

NEWSPAPERS - The _____ will publish a daily newspaper which will be distributed throughout _____ County.

PRIVATE VEHICLES AND PARKING - when all relocatees have been processed, they and residents will not be permitted to drive their cars except as necessary to fulfill assigned duties, go to grocery stores, or for emergency medical needs, move to volunteer housing facilities, or for moving vehicles to allow access by construction equipment engaged in

providing increased fallout shelter protection. Official authorized use of private vehicles will be approved by the local police in each community and identification stickers will be issued. _____ County is expected to receive about _____ cars and about _____ recreation-type (RV) vehicles. Vacant lots and existing parking areas will be used. Vehicles parked in organized parking areas will be safeguarded. Relocatees will be assigned parking areas during processing in the Reception Centers. The estimated RV's coming into _____ County will use existing trailer parks to the maximum extent.

PUBLIC SAFETY (POLICE AND FIRE) - local law enforcement and fire-fighting personnel are on an emergency status. They will be assisted by trained personnel, with equipment, from the risk area, who will augment local capabilities. There will be adequate public safety manpower and equipment during the emergency. During the emergency, fire prevention and protection services will be taxed to the utmost due to the increased population, particularly in crowded lodging facilities. Therefore, strict fire precautions must be exercised by everyone. Public Safety telephone numbers are:

| Location | Sheriff | Police | Fire | |
|---|---|---|---|---|
| | 911 | 911 | 911 | |
| | " | " | " | |
| | " | " | " | (or other number) |
| other areas | " | " | " | |

RETURN OF RELOCATEES TO RISK AREA - when the decision is made for relocatees to return to their homes, newspapers, radio and TV will make the official announcement. The schedule for return will be announced. Keep tuned to your local radio stations for emergency news.

RURAL FALLOUT PROTECTION - if you live on a farm or ranch and you have a few hours warning to prepare for the possible arrival of radioactive fallout, make arrangements for the safety of your family and yourself first. Then, time permitting, confine all livestock in buildings or drylot. Bring feed into buildings or cover it with tarpaulins if it is left outside. Store as much water as possible for livestock, especially if it is coming from ponds or streams. Cover wells and tanks, if possible.

SCHOOLS - all public and private schools in _____ County will be closed during the emergency. Most will be used for lodging and feeding relocatees.

TELEPHONE USE AND SERVICE - telephone service throughout _____ County will be operational during emergency, but you are urged to use your phone for emergencies only. Do not make unnecessary calls. Telephone service will be used extensively by government officials. It is possible that you may experience delay in dialing if you need to phone. This is due to a priority system that enables telephone service to be available for government use. By not overloading the telephone system and using it for emergency calls only, you will assist the crisis effort.

RELIGIOUS SERVICES - churches not being used for congregate care will remain open and available during the crisis. A schedule of organized church services will be published in the local newspaper and broadcast over _____ (____).

EXHIBIT 5.3

SUPPLEMENTAL RELOCATION INFORMATION

(date) Newspaper Supplement Copy (county)

IMPORTANT INFORMATION - YOUR KEY TO SURVIVAL

RISK AREA RESIDENTS WILL ARRIVE SOON!

RISK AREA RESIDENTS WILL ARRIVE SOON!

Due to the serious disaster crisis, the President has directed that a planned relocation of people will take place throughout the United States.

As a result, the Governor of _____ has directed that beginning immediately, there will be a planned relocation of people from the _____ area to _____, _____, _____, _____ and _____.

Some inconveniences will be encountered during this emergency and your normal routine will be disrupted.

DO YOUR UTMOST TO BE NEIGHBORLY AND WELCOME THE RELOCATEES. BE TOLERANT AND FRIENDLY.

Remember, we are all in this situation together, striving to help our Nation, State and community retain our democratic principles. Tolerance, assistance and cooperation are an important part of our total effort for future success.

SUPPORT THIS EFFORT. PLANS HAVE BEEN DEVELOPED AND ARE BEING IMPLEMENTED TO COPE WITH THIS EMERGENCY.

DON'T SPREAD RUMORS - Try to obtain facts, but don't repeat rumors. Your radio, TV and Newspaper will keep you informed.

Essential businesses and services will continue to operate during the emergency, while some will be closed. Only those activities that contribute to the public need and welfare will be open. Obviously there will be disruption from our normal every-day activity, but primary consideration is being given by your government to sustain our basic needs and try to keep everyone as comfortable as possible, considering that _____ County is receiving about _____ people from the risk area. Your County and city governments have reviewed and updated their emergency procedures to recieve and care for these relocatees as well as all residents.

Sample Map To Be Used.

MOVEMENT ROUTES (Hypothetical-Any Area)

Relocatees are expected to start moving by _____. They will move into _____ County on US _____ from _____ and on US _____ from Interstate _____. Please STAY OFF highways EXCEPT FOR EMERGENCY.

LODGING NEEDED

By hosting relocatees in your home you can provide a valuable public service and contribute to the local effort. If you have not and are willing to accept people in your home, please call _____ and state how many you can take.

## HEALTH & WELFARE

GENERAL SERVICES & SUPPLIES

No problems are anticipated in meeting basic needs of residents and relocatees concerning food, drugs, power, home heating fuel, water and sanitation.

You will need to obtain special authorization to buy gasoline for private vehicles IF THEY ARE NEEDED FOR OFFICIAL USE OR EMERGENCIES. It is necessary to keep traffic to a minimum during the emergency.

GROCERY & PHARMACY

To meet your needs during the relocation, groceries and pharmacies will be open. If it is possible for you to walk to these facilities, please do so. Hours of operation will be announced by the news media.

Residents are advised to obtain food. However, your local government will not permit hoarding. Buy only what you need to meet your basic needs for a two-week period. Food will be shipped to towns and cities in _____ County from _____.

MASS FEEDING FACILITIES

Restaurants, churches, schools and any other non-residential facilities with a kitchen and dining area will be used for feeding relocatees, cafeteria style.

LODGING FACILITIES

Many offices, schools, churches and other usable non-residential facilities will be used to lodge relocatees.

MEDICAL SUPPORT

Local medical facilities are being augmented by personnel from the risk area. If you have an emergency medical need, please call your family physician. But, remember that only EMERGENCY NEEDS CAN BE TREATED, because of the additional workload on local medical personnel and facilities.

If you have to take a member of your family to your doctor or local hospital, you may use your car, but REMEMBER THAT THIS IS ONLY FOR A PERSONAL MEDICAL EMERGENCY SITUATION.

Medical facilities, such as clinics, doctor's and dentist's offices, pharmacies and veterinarian's offices, will be available for emergencies only. Local news sources will identify their location and availability.

## TRANSPORTATION

### PRIVATE VEHICLES

After all relocatees are lodged, they and residents will not be permitted to drive their private vehicles except for official purposes or valid emergencies. Authorized use of private vehicles will be approved by local police in each community and identification stickers will be issued.

### PARKING

_____ County will receive about _____ cars and about _____ RV's. The _____, _____ and _____ areas will get about ____ cars and about ____ RV's, _____ and _____ about ____ cars and ____ RV's, and _____, _____ and the _____ area about ____ cars and ____ RV's. Guarded parking areas for cars will be designated by Reception Center personnel during relocatees processing.

### TRAILER PARKS

It is anticipated that about ____ recreation-type (RV's) vehicles will come into _____ County. They will use existing RV facilities or nearby suitable areas to the maximum.

## RURAL AREAS

### FALLOUT PROTECTION

If you live on a farm or ranch and you have a few hours warning to prepare for the possible arrival of radioactive fallout, make arrangements for the safety of your family and yourself first. Time permitting, confine all livestock, preferably in buildings or drylot, if possible. Bring feed into buildings or cover it with tarpaulins if it is left outdoors. Store as much water as possible for livestock. Cover wells and tanks, if possible.

## RETURN OF RELOCATEES

### NOTIFICATION

When the decision is made for relocatees to return to the risk area, the news media will make the official announcement, including the return schedule.

REMEMBER, RADIO STATION _____ WILL BROADCAST OFFICIAL EMERGENCY

INFORMATION.

FALLOUT SHELTER

SHELTER SPACES

Sufficient public fallout shelter spaces will be available in _____ County for all relocatees and residents, including those living in unincorporated portions of the County.

Relocatees will be assigned to specific shelters during processing in the Reception Centers.

The estimated _____ residents of _____ County are assigned to shelter bas d on their Voting Precinct. When directed to do so, all residents w ll report to the facility (Shelter Complex Headquarters) shown below where you will be assigned to a specific shelter.

| Residence A ea | Shelter Complex Headquarters | Address |
|---|---|---|
| Voting Pre inct | | |

NOTE: Use of the voting precinct is suggested as one approach to linking people with fallout shelter facilities. Communities are free to select any system deemed appropriate for their particular situation.

If you desire to use fallout shelter at home and not use public shelter, then start IMMEDIATELY to prepare your shelter.

Residents and relocatees will be provided public fallout shelter by using either existing, qualified facilities or upgraded buildings. Upgrading will be accomplished by using earth-moving equipment to pile dirt on and by selected buildings which will insure their capability to provide adequate fallout protection. Both residents and relocatees may be asked to assist in upgrading shelter. The upgrading process will start soon under supervision of the _____ County Engineer.

# 6. RADIOLOGICAL DEFENSE


6.1 MISSION Page 6-1
6.2 HAZARDS Page 6-2
6.3 COUNTERMEASURES Page 6-5


## 6.1 MISSION

Protecting people from the hazards of nuclear radiation is a primary prerequisite to hosting relocatees if the crisis or disaster involves nuclear materials. The need for protection applies equally to residents of risk and host areas. Many cities and towns have Community Shelter Plans (CSP's), which include the location and number of existing shelter spaces. Communities with a CSP will probably also have a RADEF (Radiological Defense) program. Other communities, not so fortunate, or those that may have let their plans become obsolete, need to either update their plans or develop a RADEF program.

During the past two decades, federal and state emergency preparedness agencies have emphasized the development of a nationwide RADEF program. RADEF is a technical program that requires special equipment and training. It is impractical to provide here all the guidance necessary to establish an effective program. Therefore, this discussion of RADEF is restricted to comments and suggestions that could be used by a community that does not have an acceptable RADEF program, to institute a program by securing equipment and assistance through appropriate channels.

A RADEF program consists of plans, procedures, instruments, shelters, and facilities, and trained personnel that can function to minimize the effects of radiation hazards caused by nuclear material accidents or nuclear weapon detonation. The community with little or no technical experience with RADEF is at a disadvantage, and should request assistance through emergency preparedness channels. It is imperative that a timely effort be made to establish procedures for monitoring and reporting radiological contamination. Assistance from state and federal agencies may be critical.

The basic concept of relocating people in a nuclear emergency is to place them in areas of lesser risk from both the direct effects -- fire and blast -- and intense radiation fallout from a nuclear weapon detonation. For those people outside the immediate damage areas and for those relocating to lower risk areas prior to an attack, effective measures can be taken against the danger of radioactive fallout. A RADEF capability is also necessary to provide for the safety of residents of a community at risk.

## 6.2 HAZARDS

When a nuclear explosion is near the ground, great quantities of pulverized earth and other debris are sucked up into the nuclear cloud. There the radioactive gases produced by the explosion condense on and into the debris, producing radioactive fallout particles. Within a short time, these particles fall back to earth -- the larger ones first, the smaller ones later. On the way down, and after they reach the

ground, the radioactive particles give off invisible gamma rays -- like X-rays -- too much of which can kill or injure people. These particles give off most of their radiation quickly; therefore the first few hours or days after an attack would be the most dangerous period.

The distribution of fallout particles after a nuclear attack would depend on wind currents, weather conditions and other factors. There is no way of predicting in advance what areas of the country would be affected by fallout, or how soon the particles would fall back to earth at a particular location.

Some communities might get a heavy accumulation of fallout, while others -- even in the same general area -- might get little or none. No area in the U.S. could be sure of not getting fallout, and it is probable that some fallout particles would be deposited on most of the country.

Areas close to a nuclear explosion might receive fallout within 15 to 30 minutes. It might take 5 to 10 hours or more for the particles to drift down on a community 100 or 200 miles away. Generally, the first 24 hours after fallout began to settle would be the most dangerous period to a community's residents. The heavier particles falling during that time would still be highly radioactive and give off strong rays. The lighter particles falling later would have lost much of their radiation high in the atmosphere.

The invisible gamma rays given off by fallout particles can cause radiation sickness -- that is, illness caused by physical and chemical

changes in the cells of the body. If a person receives a large dose of radiation, he will die. But if he receives only a small does, his body will repair itself and he will get well. The same dose received over a short period of time is more damaging than if it is received over a longer period. Usually, the effects of a given dose of radiation are more severe in very young and very old persons, and those not in good health.

Following are estimated short-term effects on humans of external exposure to gamma radiation from fallout during a period of less than one week. The total exposure is given in terms of Roentgens (R), a unit for measuring the amount of radiation exposure:

| | |
|---|---|
| 0-50R | -- No visible effects. |
| 50-200R | -- Brief periods of nausea on day of exposure. 50% may experience radiation sickness (Nausea); 5% may require medical attention; no deaths expected. |
| 200-450R | -- Most will require medical attention because of serious radiation sickness. Up to 50% deaths within two to four weeks. |
| 450-600R | -- Serious radiation sickness; all require medical attention. Death for more than 50% within one to three weeks. |
| Over 600R | -- Severe radiation sickness. 100% deaths in two weeks. |

No special clothing can protect people against gamma radiation, and no special drugs or chemicals can prevent large doses of radiation from causing damaga to the cells of the body. However, antibiotics and other medicines are helpful in treating infections that sometimes follow exposure to radiation (which weakens the body's ability to fight infections).

Almost all of the radiation that people would absorb from fallout particles would come from particles outside their own bodies. Only simple precautions would be necessary to avoid swallowing the particles, and because of their size (like grains of sand) it would be practically impossible to inhale them.

People exposed to fallout radiation do not become radioactive and thereby dangerous to other people. Radiation sickness is not contagious or infectious, and one person cannot "catch it" from another person.

## 6.3 COUNTERMEASURES

People can protect themselves against fallout radiation, and have a good chance or surviving it, by staying inside a fallout shelter. In many cases, the fallout radiation level outside the shelter would decrease rapidly enough to permit people to leave the shelter within a few days.

Even in communities that receive heavy accumulations of fallout particles, people soon might be able to leave shelter for a few minutes or a few hours at a time in order to perform emergency tasks. In most places, it is unlikely that full time shelter occupancy would be required for more than a week or two.

Information from trained radiological monitors, using special instruments to detect and measure the intensity of fallout radiation, would be used to advise people when it is safe to leave shelter.

From many studies, the Federal Government has determined that enough food and water would be available after an attack to sustain our surviving citizens. However, temporary food shortages might occur in some areas, until food was shipped there from other areas.

Most of the Nation's remaining food supplies would be usable after an attack. Since radiation passing through food does not contaminate it, the only danger would be the actual swallowing of fallout particles that happened to be on the food itself (or on the can or package containing the food), and these could be wiped or washed off. Reaping, threshing, canning and other processing would prevent any dangerous quantities of fallout particles from getting into processed foods. If necessary to further protect the population, special precautions would be taken by food processors.

Water systems might be affected somewhat by radioactive fallout, but the risk would be small, especially if a few simple precautions were taken. Water stored in covered containers and water in covered wells would not be contaminated after an attack, because the fallout particles could not get into the water. Even if the containers were not covered (such as buckets or bathtubs filled with emergency supplies of water), as long as they were indoors it is highly unlikely that fallout particles would get into them.

Practically all of the particles that dropped into open reservoirs, lakes, and streams (or into open containers or wells) would settle to the bottom. Any that didn't would be removed when the water was filtered before being pumped to consumers. A small amount of

radioactive material might dissolve in the water, but at most this would be of concern for only a few weeks.

Milk contamination from fallout is not expected to be a serious problem after an attack. If cows graze on contaminated pasture and swallow fallout particles that contain some radioactive elements, their milk might be harmful to the thyroid glands of infants and small children. Therefore, if possible, they should be given canned or powdered milk for a few weeks if authorities say the regular milk supply is contaminated by radioactive elements.

In summary, when compared to the great danger from external radiation, there is small danger of people receiving harmful doses of fallout radiation through food, water or milk. People suffering from extreme hunger or thirst should not be denied these necessities after an attack, even if the only available supplies might contain fallout particles.

RADEF deficient counties/cities should acquire radiological monitoring instruments, dosimeters for measuring individual radiation doses, and related equipment necessary to achieve a reasonable RADEF capability. Equipment is available from the federal government through state channels. A team of trained monitors and analysts should be available to make observations and analyze report data.

Radiological data reports are invaluable to officials charged with direction and control functions. From the initial prediction of the time of arrival of radioactive fallout in a community to the final

reporting which permits people to emerge from shelter, such data is critical to the health and survival of both residents and relocatees. Decisions by direction and control officials for all operations will be governed according to the radiological situation existing at a given time.

Technical assistance should be requested from the state or state/regional offices so that county emergency services officials can recruit and train at least two RADEF officers and supporting staff for the EOC. In turn these staff should recruit and train sufficient monitors (local government employees or volunteers) to man the network of reporting stations, including fallout shelters.

Trained personnel from the risk area may be utilized in support of RADEF and shelter operations. Resource deficits in host area and resource excesses in risk areas are most likely to be trained personnel and essential equipment. Detailed, concurrent and coordinate liaison and planning among host and risk area staffs on RADEF requirements can assure the optimum matching of available, excess skilled personnel, and equipment with shortages in the host area.

Fallout shelter requirements are discussed in Section 18 -- Fallout Shelter Organization and Operations; decontamination in Section 26.

# 7. EMERGENCY PUBLIC INFORMATION

7.1 PUBLIC INFORMATION OFFICER Page 7-1
7.2 ROLE OF OFFICIAL INFORMATION Page 7-2

## 7.1 PUBLIC INFORMATION OFFICER

An essential element of emergency evacuation operations includes keeping both relocatees and residents informed regarding actions necessary for their protection and care, and the status of the emergency on a continuing basis. Local news and instructions are the responsibility of local government officials. If a public information officer (PIO) exists in a county or community, that person should act for responsible officials to disseminate news. In a situation where there is no PIO, it is suggested that an official spokesperson be designated and assigned the PIO functions, for other officials will probably not have the time or background data necessary to adequately perform the function in addition to their other duties.

A well coordinated effort is necessary to ensure that accurate emergency information is quickly made available to the public. Accordingly, the roles of various officials dealing with the public should be defined to:

- Ensure that procedures are established to preclude the dissemination of incorrect or conflicting information;
- Control all information releases;

- Provide that the PIO coordinate information releases for headquarter activities;
- Ensure that the PIO and the emergency services director agree as to who should be responsible for distributing newspaper supplements and other emergency information; and
- Ensure that relocatees and residents are not prevented access to emergency information because of language barriers.

## 7.2 ROLE OF OFFICIAL INFORMATION

The substance of instruction and directives to the public should originate at an official government source. No news medium should be the originator or source of directives to the public without official government approval. This means that official news releases and desired public information originated by the various participating agencies should be channeled through and approved by one central and authoritative source. As far as possible, information and editorial comment developed and disseminated by the media should be reviewed for accuracy and corrections issued when necessary. (Obviously, local censorship is impractical and undesirable.) There will undoubtedly be many calls for advice and information coming in to government officials. The PIO should establish an Emergency Information Center, and designate staff (and volunteers) to answer telephones and disseminate required information. Finally, all information should be as complete, accurate, and realistic as possible.

Major items of emergency information to be disseminated via radio, television and newspapers are emergency evacuation information for

residents during the pre evacuation period and the movement phases and in case in place shelter protection is required. Message formats are contained in Section 5 because of the urgency associated with warning and because their release may be triggered by receipt of an official declaration of the emergency. The format of these releases in no way diminishes the need for close interaction between the PIO and emergency operations officials.

# 8. INDUSTRIAL AND ECONOMIC RELATIONSHIPS


8.1 MISSION Page 8-1
8.2 ESSENTIAL INDUSTRIES AND SERVICE Page 8-2
8.3 FINANCIAL CONSIDERATIONS Page 8-3


## 8.1 MISSION

Government officials are responsible for providing information, protection and guidance to both residents and relocatees, and to business and industry on an equal basis. It is important that special attention be given to essential business and industrial activities that sustain the population during the emergency, and contribute to eventual recovery. Certain categories of industries and services are necessary to provide life support functions and should continue operation during certain phases of an emergency. Others should either be closed or operated on a limited basis for the duration of the emergency to conserve and allow reallocation of resources. This particularly applies to energy sources (Sections 22 and 23).

Decisions by local management on which industries or services should remain open will be difficult for both political and economic considerations. Therefore, government officials should be guided by federal and state decisions. Within that framework, every precaution should be exercised to ensure that fair and judicious decisions are made in all instances. Immediately following the declaration of an

emergency, the chief executive should take action within the purview of his emergency powers to ensure that non-essential businesses limit operation; where necessary, the facilities housing such businesses should be designated as lodging or shelter for relocatees or residents.

## 8.2 ESSENTIAL INDUSTRIES AND SERVICES

The following categories of industries and services are typical of those likely to remain in operation during an emergency:

Automotive repair (selected);
Bakeries;
Building materials (selected);
Clinics;
Communications facilities (newspapers, radio, and television);
Dairies;
Defense-related production;
Doctors and dentists;
Electric power generation and distribution;
Farms;
Fuel production and distribution;
Food processors;
Food stores (selected);
Funeral homes;
Gasoline stations (selected);
Government offices (selected);
Hospitals;
Jails;
Laundromats and laundries;
Libraries;
Medical and health supplies and equipment;
Mines;
Sanitation operations; and
Transportation (selected).

Where some but not all businesses or activities of a particular category are not essential, local decisions must be made as to which will close. They could possibly be placed on a rotational schedule to equalize hardships. In some locations, where critical industries have

plants, guidance on the operation of the plants will emanate from the federal government. These instances may relate to the production of materials and products necessary to a war effort or the nation's recovery.

## 8.3 FINANCIAL CONSIDERATIONS

The entire subject of economic and monetary controls and procedures is fraught with uncertainties for local officials. Economic and fiscal procedures for accounting and paying for resources and supplies will be defined by higher level directives. Though it can be assumed that no one will be denied the essentials of life for lack of money, federal and state officials will probably determine their approach to these matters in light of the perceived crisis. It will then be incumbent on local officials and organizations to implement the decisions made.

# 9. TRAINING


| | |
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| 9.2 OPERATIONS | Page 9-2 |
| 9.3 SOURCES | Page 9-3 |
| 9.4 VOLUNTEERS | Page 9-3 |


## 9.1 MISSION

For an effective emergency preparedness program, management officials should play a significant role in staff training. Where current emergency plans exist in a community, there is usually a built-in mechanism for training staff personnel and auxiliaries for emergency duties. Training staff for emergency operations is a forerunner to testing plans and assuring operational proficiency. Training for emergency evacuation is no different, except that this guide is directed primarily toward the community without a formal emergency plan. It may be on its own, with insufficient time to devise a coordinated plan before facing the immediate problem of managing evacuation reception and care.

The primary purpose of training is to communicate information about emergency requirements and to achieve coordinated conduct of operations. Even in the absence of formal emergency plans, management may recognize early in a pre-disaster situation the urgency of certain operating needs, and take actions to initiate training on a limited and unscheduled basis.

## 9.2 OPERATIONS

To assist management, the following list of operations should be considered for emergency training. Implementation will depend, of course, on the availability of time and competent staff to accomplish the training:

Emergency operations management

Radiological defense (RADEF)

- RADEF officer
- RADEF monitors
- Aerial radiological monitors
- Shelter radiological monitors
- Self-protection radiological monitoring
- Radiological decontamination

Reception center Lodging section Shelter management

- Shelter complex headquarters
- Individual shelters

Fallout shelter upgrading

Although Boards of Supervisors and city or county mayors or managers will have overall responsibility for training, each official in charge of a department or separate function should be responsible for training his staff and augmentation personnel to assure a responsive effort during the emergency situation. Recognizing the need for proficiency in all operations and activities is an inherent responsibility of management at the various levels of functional control. The degree of effectiveness achieved will be in direct proportion to the emphasis placed on training by the chief executive and top management officials.

## 9.3 SOURCES

There is a large body of emergency training literature distributed by FEMA and state emergency preparedness organizations. In addition, the American Red Cross and many specialized agencies have training literature and personnel. School teachers and local scientific personnel may be available. All sources should be explored.

Where the capability does not exist within local county and city operations to conduct technical and specialized training, assistance should be requested for emergency preparedness officials at the state and federal level. This should be done as early as possible. Any training accomplished in the pre evacuation period will be of major assistance in the event that emergency evacuation is implemented.

## 9.4 VOLUNTEERS

There are numerous groups of volunteers who regularly support emergency operations. These include personnel of the American Red Cross, the Salavation Army, and specialized communication, fire, police, and rescue organizations. For this manual, these are referred to as "auxilaries" to differentiate from untrained, unorganized volunteers. Experience has shown that volunteer assistance is available during crises and disasters on a "feast or famine" basis. For many functions of emergency evacuation, particularly for local officials without plans or experience, the difficulties of effectively integrating and controlling volunteer personnel may outweigh their potential usefulness. This is particularly true for the emergency services (Sections 10 through 13).

The functions associated with reception and care (Sections 14 through 18) may require host areas to establish large organizations practically from scratch. (It is suggested that some social organization like the local school system, churches or welfare agency be the nucleus.) This organization may require large numbers of volunteers assembled on an ad hoc basis. Training materials may be available from FEMA and the American Red Cross. However, local officials should realize that developing the organization and training will largely be on-the-job and self-help. Further, experience has shown that many volunteers become embittered because their time and skills are not adequately used. Difficulties include planning for needs, recruitment, assignment, and supervision, as well as training.

# 10. EMERGENCY SERVICES

10.1 MISSION Page 10-1
10.2 STAFF AND RESOURCES Page 10-2

## 10.1 MISSION

The purpose of this section of the guide is to define and explain the general functions of emergency services -- law enforcement, fire protection, and medical and health -- for operations during an emergency evacuation. Sections 11, 12 and 13 treat the services individually. The basic mission and functions of each are:

- Law Enforcement. To maintain law and order through traffic and crowd control, prevent crimes against people and property; provide security support to lodging and shelter managers and to vital facilities and supplies; and to provide for continuing functions of jails and courts.
- Fire Protection. To limit loss of life and property from fires and other damage, provide leadership and training in fire prevention and suppression, provide pre-hospital emergency medical services, lead search and rescue, assist in mobile medical aid and ambulance transport of injured persons.
- Medical and Health. To provide emergency medical care and treatment for the injured, chronically ill and aged; to provide medical support during the movement phase and health services for the "normal" relocated and resident populations; and to support public health activities.

Many of the policies and procedures in effect for the day-to-day operation of emergency services will apply to both host and risk area communities. In many locations, current emergency plans will contain

provisions for coping with various types of emergencies. These plans should be followed or modified to meet crisis or disaster requirements. If time is a critical factor, it may not be practical to alter existing plans. In such cases, additional requirements should be analyzed and new operating procedures devised if necessary and feasible.

## 10.2 STAFF AND RESOURCES

Augmentation of staff and equipment can be a critical concern. Where resources are not available within the host community, assistance should be sought from the risk or target area communities or adjacent communities that may not have a host responsibility. Liaison with counterpart agencies and departments in other communities will probably be an ongoing activity of daily operations -- by mutual aid compacts or informal agreements -- to respond to one another's needs. Where current agreements do not take into account the added and different requirements of host area operations, timely action is suggested to assure that required support can be obtained in an emergency. Federal and state resources may be available. Outside support is normally available during moderate disasters. Resources are finite, however, so the greater the impact and larger the extent of the disaster, the less outside assistance will be available. Prudent emergency service management requires self-sufficient, flexible operations by local permanent forces, supplemented by local auxiliary personnel.

# 11. LAW ENFORCEMENT AND TRAFFIC MANAGEMENT SERVICES


| | |
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| 11.6 IN PLACE SHELTER PHASE | Page 11-7 |
| 11.7 POST DISASTER PHASE | Page 11-8 |
| 11.8 COORDINATION | Page 11-8 |


## 11.1 MISSION

These guidelines are intended for both county sheriffs and city police departments. They reflect the urgency and necessity for close cooperation between all law enforcement agencies in adjacent jurisdictions. This does not mean that agencies should lose their identity or authority by being integrated with other agencies; it does mean that conditions will be so complex and difficult that a fully coordinated total effort will be required for maximum results and benefits. Typically, the sheriff will be responsible for law enforcement activities in the unincorporated areas of a county, parish or other comparable jurisdiction. Chiefs of police will continue to be responsible for law enforcement activities within their respective city limits. State highway patrol forces will control traffic on arterial highways. For maximum effectiveness, a close and continuing coordination between these agencies will be essential during all phases of an emergency evacuation.

Law enforcement agencies should be prepared to play a major role in supporting and controlling a variety of services and functions associated with evacuating and hosting relocatees. A possible major lifesaving service could be the dissemination of alert and warning information. Few, if any, communities have fully effective warning systems in place. In addition to police vehicles, equipment such as sirens, bullhorns, and radios would be invaluable to help spread the word to local residents and relocatees.

Law enforcement agencies will be faced with increased workloads, particularly in controlling the movement of people and traffic. Provision should be made for continuing the functions of jails and law courts. Host area operating staffs will require augmentation, and added police vehicles and equipment may be needed to support the increased effort. Where existing plans and procedures (mutual aid compacts, etc.) do not currently provide for augmentation and assistance from nearby areas (including risk areas), action should be taken to ensure that needed support will be available to the extent possible. Methods and procedures should be devised to incorporate augmentation forces into local operations. Where other jurisdictions are involved, the plans should be coordinated with the responsible officials. Use of outside forces as contigent units is usually more effective than use as fillers.

## 11.2 BASIC DATA REQUIREMENTS

To conduct emergency evacuation and eventual reception and care operations, law enforcement and traffic management officials should possess certain basic data, which should be upgraded as the disaster situation and response conditions change. It will be essential to know:

- Dates and times relocatees will move from risk areas;
- Number and type of vehicles expected;
- Routes of exit from the risk area and of entry to the host county and communities;
- Locations of reception centers;
- Locations of parking areas;
- Patrol and security requirements for risk area facilities, reception and care centers, and other emergency agencies;
- Radiological defense policies and procedures;
- Policies regarding use of vehicles after check in;
- Emergency highway traffic regulations in effect;
- Locations of traffic control points established by other agencies;
- Expected number of prisoners and other special group transfers;
- Locations and operating hours of fuel supply points;
- Numbers and locations of tow trucks and other emergency service vehicles to keep streets and roads clear;
- Requirements for public transportation;
- Communications capability with all emergency organizations, including other law enforcement agencies;
- Availability of augmentation staff and equipment;
- Plans of adjacent jurisdictions and state law enforcement agencies regarding movement of evacuees;
- Plans of other emergency agencies in the community; and

- Requirements for crash training of all staff, including auxiliary and augmentation personnel.

Much of this information may be available from emergency evacuation or other disaster plans, either routinely or on an expedited basis should time be short. Some of the requirements may be satisfied by general knowledge of various situations, and by following day-to-day operating procedures. Personal knowledge and experience will be invaluable during emergency conditions. However, complete and coordinated operations assure that all concerned understand total requirements. This should be the ultimate objective for all communities. (These guidelines are primarily for use where either limited or no emergency evacuation planning has been accomplished.)

As indicated in Section 3, a progression of emergency actions should be taken or considered in conjunction with the disaster time phases, although responses by individual communities to the various changes in conditions may vary widely. When a community is responsible for the reception and care of relocatees, there are certain minimum actions to consider. These are based on the time phases of the disaster, and are listed below:

## 11.3 PRE EVACUATION PHASE

This relates to those actions taken during a normal preparedness phase up to the receipt of advice that risk areas are to be evacuated. This phase could involve an extended period of time, or it could be

quite limited. (Should there be no pre-relocation phase, the actions should be implemented early in the movement phase.) News media coverage and pronouncements by the President and State Governors could impact preparedness planning directly, particularly the preparation for evacuation of cities and for the reception and care of people in host communities.

All agencies and departments of local government may be advised to review and update existing plans because of some critical event or warning. In the absence of formal evacuation planning, the following actions would be appropriate for law enforcement and traffic management agencies:

- Review or make traffic control plans;
- Review availability of evacuee parking and reception areas, or designate areas to be used;
- Establish communications system among all police and sheriff's departments, and with other emergency services;
- Review or make plans for increased police patrols of sensitive facilities and lodging, shelter and parking areas;
- Advise all law enforcement officials to plan for use of reception control procedures;
- Develop procedures for identification of vehicles to be used in emergency evacuation (see Exhibit 11.1 for sample windshield sticker);
- Check status and availability of all required equipment and auxiliary personnel;
- Arrange for route and lodging markers;
- Establish communications with state and adjacent area law enforcement services; and
- Maintain 24-hour contact with key officials.

- Develop plans for the relocation and care of dependent families of law enforcement officers.

If a partial mobilization results from a developing disaster situation, law enforcement preparedness measures should prove beneficial to follow-on actions. The following measures are suggested:

- Alert all regular and auxiliary law enforcement personnel to be prepared for traffic control and patrol duty on receipt of evacuation orders;
- Check and monitor preassigned communications with adjacent area and state law enforcement agencies;
- Mark evacuee parking and reception areas;
- Post traffic control and directional signs; and
- Advise direction and control when actions are complete and if additional personnel will be required.

## 11.4 EVACUATION MOVEMENT PHASE

The evacuation of relocatees from risk areas to host areas requires that the law enforcement agency take actions to control the movement of people within jurisdictional limits for whatever means of transportation is used and to provide security for the reception and care of evacuees. The following actions are suggested:

- Fully staff traffic control points;
- Expedite marking of evacuee parking areas and positioning of traffic control and directional signs;
- Install directional signs and barricades and place traffic control personnel in designated locations to direct relocatees to reception centers;
- Assure availability of emergency towing and repair vehicles to keep traffic moving;

- Advise direction and control when evacuees leave risk areas and begin to enter host community;
- Expedite evacuee movement into parking and registration areas;
- Commence patrols of sensitive facilities and of lodging and parking areas;
- For those evacuees moving by public transportation, supervise collecting and loading points and unloading for registration and movement to assigned lodging; and
- Integrate augmentation staff and equipment from other jurisdictions, if available.

## 11.5 EVACUATION MAINTENANCE PHASE

When all lodging spaces have been allocated and evacuee support operations have begun, certain changes in control, security and communications may be in order:

- Change traffic control operations to regulate essential support transportation;
- Reinforce street patrols and augment lodging guards as necessary;
- Provide security for sensitive and vital facilities; and
- Organize communications network to ensure operational capability with lodging facilities and other emergency organizations.

## 11.6 IN PLACE SHELTER PHASE

Should disaster conditions require movement of relocatee and resident population to in place shelters, law enforcement forces should assist in providing warning, expediting movement, and providing internal shelter security. They may also assist RADEF operations.

## 11.7 POST DISASTER PHASE

When it is declared safe for relocatees to return to their homes, some of the actions taken earlier would need to be reversed or amended to assure an orderly return. The following actions are suggested:

- Reactivate traffic control points and road blocks;
- Reestablish patrols of evacuee parking areas;
- Augment patrols of lodging or shelter areas;
- Establish guards at food sales and distribution points; and
- Advise direction and control when preparations are completed.

When all evacuees have departed, it would be appropriate to:

- Remove all road blocks and traffic control equipment; and
- Return to normal operations as soon as practical.

## 11.8 COORDINATION

The actions suggested for the various time phases would normally be accomplished concurrently with other emergency procedures of local government, either planned in advance or developed on a crisis basis. Therefore, some of the actions outlined above will depend on steps taken by other departments and agencies and on their cooperation with law enforcement. Also, the basic assumption is made that, while emergency evacuation plans may not have been written, the community has accomplished some emergency planning that would serve as a base for planning and conducting evacuation operations. The actions suggested

should not be considered complete, and each locality should take whatever additional actions are deemed necessary and appropriate to its individual situation.

During the various operational phases and functions, risk area operating staffs must be capable of continuing their respective operations and possibly augmenting, based on mutual agreement, host communities by rescheduling personnel, establishing longer work shifts, and possibly scaling down or eliminating certain activities.

EXHIBIT 11.1

SAMPLE WINDSHIELD STICKER FOR OFFICIAL VEHICLES

(use state and/or local designation appropriate)

Department or Office of Emergency Services

(use appropriate office title)

Official Vehicle No._____

_____

signature of sheriff or chief of police

NOTE: Sticker can be issued and controlled by either the Director of Emergency Service, the county sheriff, or city police chiefs. The CD symbol is used for recognition value only; communities should develop what they consider most appropriate for their particular area. Control of stickers is naturally quite important to preclude wrongful use. Policies for issuing stickers and controlling private vehicles should be jointly established by law enforcement officials, the Director of Emergency Services, and the Chief Executive. The only vehicles authorized a sticker should be those required for emergency operations. Non-essential vehicles can be controlled by sales of gasoline and the requirement for official stickers.

# 12. FIRE PROTECTION SERVICES


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## 12.1 MISSION

The mission and functions of the fire services under emergency evacuation conditions versus day-to-day operations change only to the degree that a large number of relocatees will impact the resources of the service (personnel, communications and equipment) and that exposure to the emergency hazards may limit operations. These guidelines are intended to define actions appropriate to the fire services in an emergency evacuation and to reflect the urgency for coordination between all departments and agencies of local government for maximum results and benefits.

Fire protection services in communities charged with hosting relocatees will be faced with increased workloads, because of the influx of people. Fire prevention and suppression activities will increase along with emergency medical services. A major concern of fire services will be augmenting personnel, vehicles, communications, personal equipment, and any other resources necessary to accomplishing an expanded mission.

As residents of the risk area evacuate, the need for fire service personnel and their equipment will decrease in the risk area. Although fire services in the risk area must continue in force, resources excess to risk area needs should be considered to augment hosting community resources. Hosting communities should therefore determine their requirements for added staff and equipment, and seek agreements with risk area fire departments. In many areas, mutual aid agreements exist between communities and between fire departments, fire districts, countywide fire agencies, and privately operated fire departments. State and federal agencies may also be able to assist. Other agreements or compacts may be formed or modified as appropriate to compensate for the additional host area requirements. If not currently a part of the emergency plan, this should be given a high priority. However, as with most emergency services, a prudent fire chief will be well advised to prepare to operate with the existing forces, supplemented by local auxiliaries.

## 12.2 BASIC DATA REQUIREMENTS

To conduct emergency evacuation operations, fire service officials should possess certain basic data, which should be upgraded as the situation changes. It is essential to know:

- Dates and times relocatees will move from the risk areas;
- Egress and entry routes to community;
- Locations of reception centers;
- Radiological defense policies and procedures;
- Locations and operating hours of fuel supply facilities;

- Communications capability with all emergency services in the area;
- Availability of auxiliary and other augmentation staff and equipment;
- Plans of other emergency operations in the community, particularly police and medical forces; and
- Requirements for crash training of all staff, including auxiliary and augmentation personnel.

As indicated in Section 3, a progression of emergency actions should be taken or considered in conjunction with disaster time phases. Responses by individual communities to the various changes in conditions may vary widely; it would be impractical for these guidelines to attempt to anticipate all possible contingencies. When a community is responsible for the reception and care of relocatees, however, certain minimum actions should be considered. Based on the time phases of the disaster, these actions are listed below:

## 12.3 PRE EVACUATION PHASE

This relates to those actions taken during a normal preparedness phase up to the receipt of advice that risk areas are to be evacuated. This phase could cover an extended period of time, or it could be limited. (Should there be no pre evacuation phase, the actions should be implemented only during the movement phase.) News media coverage and pronouncements by the President and State Governors could impact directly on preparedness planning -- particularly the preparation for the reception and care of people in host communities.

All agencies and departments of government may be advised to review and update existing plans because of some critical event or warning. In the absence of formal emergency evacuation planning, the following actions would be appropriate for fire agencies:

- Review emergency plans;
- Check status of auxiliary and volunteer firemen and equipment;
- Review plans for possible crash training programs;
- Establish communications system between all elements of the fire service;
- Determine fire support requirements for sensitive facilities and lodging and shelter facilities;
- Advise key fire department officials to plan for the use of reception control procedures; and
- Maintain 24-hour contact with key officials.
- Develop plans for the relocation and care of the dependent families of firefighters.

If a developing crisis or disaster allows time, the following fire department preparedness measures are suggested:

- Alert regular and auxiliary personnel in accordance with staffing requirements;
- Advise direction and control of expected fire and rescue manpower or equipment shortages; and
- Check and monitor communications with adjacent area and state forces as appropriate.

## 12.4 EVACUATION MOVEMENT PHASE

The evacuation of relocatees from risk areas to host areas requires the host fire services to work with the officials in charge of lodging to ensure that fire hazards are reduced to a minimum and that fire regulations are posted and enforced in all lodging facilities. Hopefully, there would have been time for inspection of buildings and posting of regulations during the pre evacuation period. (Some regulations may require amendment to permit the housing of greater numbers of people in certain facilities.) The following fire service activities would be appropriate:

- Fully staff all fire stations and provide personnel for lodging facilities to monitor occupancy rates and initiate fire prevention measures;
- Assist law enforcement forces at traffic control points and on highways to suppress vehicle fires;
- Conduct rescue and emergency medical services; and
- Initiate emergency patrols.

## 12.5 EVACUATION MAINTENANCE PHASE

When all lodging spaces have been allocated and evacuee support operations have begun, certain actions will be necessary:

- Continue fire suppression activities;
- Conduct continuous inspection to identify and correct hazardous fire safety infractions caused by the relocatees; anticipate "jury-rigged" electrical circuits, and exits impeded by furniture, supplies and equipment;
- Continue to instruct relocatees on fire prevention techniques and what to do in case of fire;

- Anticipate increased incidents requiring rescue of relocatees unfamiliar with their surroundings; and
- Continue pre-hospital emergency medical services.

## 12.6 IN PLACE SHELTER PHASE

Should disaster conditions require movement of relocatee and resident population to in place shelters, fire forces should assist in providing warnings, conduct continuous shelter inspections, instruct shelter population in fire prevention and suppression, continue to provide emergency medical services, and assist overall shelter management operations. Fire personnel may also assist RADEF operations.

## 12.7 POST DISASTER PHASE

Fire operations can be expected to return to normal except for decontamination (Section 26) of facilities subject to radioactive fallout or other toxic materials. An effective means of decontamintion is by washdown and flushing operations. Fire departments may be given the responsibility for such operations or to assist in their accomplishment. If radioactive material is involved, the local official charged with radiological defense will coordinate decontamination procedures and fire departments should anticipate providing assistance.

## 12.8 COORDINATION

The actions suggested for the various time phases would normally be accomplished concurrently with other emergency procedures of local government, either planned in advanced or developed on a crisis basis. Therefore, some of the actions suggested will depend on steps taken by other departments and agencies, and on their coordination with fire services. Also, the basic assumption is that, while emergency evacuation plans may not have been written, the community has accomplished some emergency planning, which would serve as a base for planning and conducting evacuation operations. The actions suggested should not be considered complete, and each locality should take whatever additional actions are deemed necessary and appropriate to its individual situation.

During the various operational phases and functions described above, risk area operating staffs must be capable of continuing their operations and possibly augmenting, based on mutual agreement, host communities by rescheduling personnel, establishing longer work shifts, and possibly scaling down or eliminating certain functions.

# 13. MEDICAL AND HEALTH SERVICES


| | |
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| 13.2 BASIC DATA REQUIREMENTS | Page 13-3 |
| 13.3 PRE EVACUATION PHASE | Page 13-4 |
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| 13.5 MAINTENANCE PHASE OPERATIONS | Page 13-6 |
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## 13.1 MISSION

The purpose of this section of the guide is to define and explain the various functions of medical and health services as they apply to operations during the pre evacuation, movement and maintenance phases of emergency evacuation. The basic mission and functions under evacuation conditions are to:

- Provide emergency medical care and treatment for the chronically ill, injured, aged, and handicapped patients.
- Provide in and out patient services for the "normal" population by expanding the capacity of existing health care facilities.
- Coordinate mobile and paramedical services (unless these are normally carried out by the fire services).
- Coordinate inter hospital activities and requirements.
- Assist law enforcement officials and coroners in the identification, registration and interment of the dead.
- Provide public health and environmental sanitation services for host area populations that may increase two to three times or more over the normal population.
- Institute safeguards for the health of survivors. Maintain or restore environmental sanitation and provide temporary

safeguards that will assure the potability of water and milk and the safety of food; prevent the spread of disease in case of shortages or damage to normal protective facilities, equipment and services.

- Assist other services, such as RADEF, in defense against the effects of biological or chemical attack.
- Coordinate the acquisition and use of medical and health supplies, personnel and equipment, including resources to be provided by the state or by adjacent areas.

Medical and health services are, in varying degrees, emergency action oriented, so many of the policies and procedures in effect for day-to-day operations will apply equally well during emergency evacuation. Major problems will probably result from increased workloads, increased sanitation problems through assignment of people to common lodging, shelter and eating facilities not normally geared to the numbers of peoples to be accommodated; limited bed space in hospitals; and shortages of qualified personnel, supplies and equipment.

As limited resources, particularly personnel, can be expected to be a critical factor for host areas in an emergency evacuation, augmentation of staff -- doctors, nurses, and medical technicians -- should be given high priority. A major source should be the risk areas. Once evacuation of risk areas has begun, the requirements for medical and health staff and supplies will decrease, based on the rate and scope of evacuation. A closely coordinated effort should ensure the assignment and use in the host area of staff excess to the needs of the risk area. Agreements negotiated as far in advance of evacuation as possible are suggested.

The possibility that staff and equipment from federal and state institutions and activities from either the risk area or from local operations may be available should not be overlooked. It is essential that all resources be identified and used to the maximum.

## 13.2 BASIC DATA REQUIREMENTS

The County Health Officer will normally be the overall coordinator of medical and health services. This person will be responsible for liaison with other emergency services (i.e., direction and control, law enforcement, fire services, reception and care, and resources and supply, and should be assisted by deputy coordinators or assistants for medical care and public health (including sanitation and mortuary services). To plan for and execute evacuation operations, medical and health service officials need certain basic data, which should be upgraded as the situation changes. Information may emanate from a variety of sources, so it is urgent that a central official source be used. This source will normally be the spokesperson for the Board of Supervisors or the Mayor. It could be the PIO, the emergency coordinator, or another official. It will be essential to know:

- Dates and times relocatees will move from the risk areas;
- Number of relocatees expected;
- Status of patient transfers from risk area;
- Locations of reception centers;
- Radiological defense policies and procedures;
- Location and operating hours of fuel supply facilities;

- Communication capability with all emergency operations including all hospitals and clinics in the area; and
- The plans of other emergency operating agencies, particularly fire and police.

As indicated in Section 3, a progression of emergency actions should be taken or considered in conjunction with disaster time phases. Responses by individual communities to the various changes in conditions may vary widely; it would be impractical for these guidelines to attempt to anticipate all possible contingencies. When a community is responsible for reception and care of relocatees, however, certain minimum actions should be considered. Based on the time phases of the disaster, these are listed below:

## 13.3 PRE EVACUATION PHASE

This relates to those actions taken during a normal preparedness phase up to the receipt of advice that risk areas are to be evacuated. This phase could cover an extended period, or it could be quite limited. (Should there be no pre evacuation phase, the actions should be implemented early in the movement phase.) News media coverage and pronouncements by the President and State Governors could impact directly preparedness planning -- particularly preparation for the reception and care of people in host communities. All agencies and departments of government may be advised to review and update existing plans because of some critical event or warning. In the absence of emergency evacuation planning, the following actions would be appropriate for medical and health services:

- Review emergency plans;

- Check status and availability of all required additional personnel and equipment;
- Determine requirements and capabilities for medical self-help training;
- Check communications system between all elements of medical and health services;
- Determine which risk area facilities will remain in operation;
- Determine medical and health support requirements for lodging, shelter and eating facilities;
- Determine probable impact of relocation on sanitation facilities and water supplies; and general health requirements, such as communicable disease prevention and control measures;
- Advise key medical and health officials of changes in overall situation and of actions by government at various levels;
- Establish communications with adjacent area medical and health coordinator; and
- Maintain 24-hour contact with key officials.
- Develop plans for the relocation and care of dependent families of medical personnel.

A partial mobilization may have resulted from a developing disaster situation. Medical and health preparedness measures should prove beneficial to follow-on actions. The following actions are suggested:

- Alert regular, auxiliary and volunteer personnel in accordance with staffing requirements;
- Advise direction and control of manpower and equipment shortages and augmentation actions taken;
- Check and monitor communications with adjacent area and state officials as appropriate;
- Plan for the rapid discharge of able patients from hospitals, nursing homes, etc. and the conversion of schols, hotels and other facilities to temporary care facilities;
- Plan to coordinate mortuary services for interment of the dead, grave registration, and related requirements;

- Plan to disseminate sanitation information in newspapers and by radio.

## 13.4 EVACUATION MOVEMENT PHASE

The evacuation of relocatees from risk areas to host areas requires that the host community medical and health services take all necessary action to receive, care for and protect the evacuees. The following activities would be appropriate:

- Fully staff all medical facilities and provide personnel for lodging facilities to monitor occupancy rates and initiate health measures;
- Assist law enforcement forces at traffic control points and rest stops to care for emergency illnesses and accidents;
- Coordinate mobile medical, paramedical, and ambulance services (if appropriate) with requirements and emergency room capacities; and
- Initiate public health monitoring and remedial procedures.

## 13.5 MAINTENANCE PHASE OPERATIONS

When all lodging spaces have been allocated and evacuee support operations have begun, certain medical and health activities will be necessary.

- Work with the officials in charge of lodging to ensure that cleanliness and sanitation policies are in effect;
- Ensure cleanliness in feeding facilities and the provision of pure drinking water for lodging and shelter operations;
- Enforce these policies through inspection and notices posted in lodging and eating facilities; and
- Inspect and ensure proper handling of sewage and solid waste.

## 13.6 IN PLACE SHELTER PHASE

Should disaster conditions require movement of relocatee and resident population to in place shelters, medical and health services will have responsibilities similar to those under congregate care conditions. A greater concentration of people in fewer facilities will probably generate more serious problems. Where patients are transferred from hospitals, clinics and rest homes to shelters, it is expected that medical and health personnel will accompany them to shelter for their own protection. Consequently, shelters will be staffed by medical and health personnel, but caution should be exercised to ensure that doctors, nurses and medical technicians are apportioned equitably. Coordination with direction and control is necessary to achieve the proper distribution of resources.

## 13.7 POST DISASTER PHASE

Operations can be expected to return to normal except for decontamination of facilities affected by radioactive fallout or other toxic materials. An effective means of decontamination is by washdown and flushing operations. The local official charged with radiological defense will coordinate decontamination procedures, and medical and health services should anticipate providing assistance.

## 13.8 COORDINATION

The actions suggested for the various time phases would normally be accomplished concurrently with other emergency procedures of local government, either planned in advance or developed on a crisis basis. Therefore, some of the actions suggested above will depend on steps taken by other departments and agencies, and on their coordination with medical and health services. Also, the basic assumption is made that, while emergency evacuation plans may not have been written, the community has accomplished some emergency planning, which would serve as a base for planning and conducting evacuation operations. The actions suggested should not be considered complete, and each locality should take whatever additional actions it deems necessary and appropriate to its individual situation.

During the various operational phases and functions described above, risk area operating staffs must be capable of continuing their operations and possibly augmenting, based on mutual agreement, host communities by rescheduling personnel, establishing longer work shifts, and possibly scaling down or eliminating certain activities.

# 14. RECEPTION AND CARE ORGANIZATION AND FUNCTIONS


| | |
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| 14.1 MISSION | Page 14-1 |
| 14.2 FACILITIES | Page 14-2 |
| 14.3 ORGANIZATION | Page 14-4 |
| 14.4 FUNCTIONS | Page 14-5 |


## 14.1 MISSION

The purpose of this section of the guide is to define host area operational requirements and to outline procedures and preparations for reception and care for both residents and relocatees during emergency evacuation. The movement period is considered the most critical for operational purposes, and will receive major emphasis. However, it will also be essential that the pre-relocation and maintenance periods be understood in sufficient detail to provide a logical and coordinated approach to overall reception and care operations. The basic mission and responsibilities of reception and care are to support the human needs of both residents and evacuees in a host area by:

- Developing procedures for receiving and registering relocatees;
- Determining lodging (congregate care) requirements and providing best available housing;
- Providing for relocatee feeding, including facilities and a system for logistic support;
- Providing other essential services required by groups, such as the aged, infirm, and handicapped, needing special support;
- Providing the best available shelter protection for residents and relocatees; and

- Developing procedures for an orderly return to normal services at the conclusion of the relocation period.

There may be warning or a progressive set of circumstances or actions incidental to the crisis, which will precede any relocation of people from risk to host areas. Some degree of emergency planning will probably have been accomplished in most host areas, either as the result of other emergency planning or experience, or due to normal operational considerations. Therefore, the following subsections of this section are oriented mainly toward how a host area can meet its responsibilities for receiving and caring for relocatees and its own residents, once relocation has been initiated by a federal or state government directive.

## 14.2 FACILITIES

The basic national guidance is to house relocatees in congregate care facilities and, if necessary, in other unoccupied buildings rather than in occupied residences. However, the results of research and experience in peacetime disasters indicates that a large proportion of host area families would be willing to share their homes with one or more relocated families. Where maximum utilization of homes is possible local management problems of mass care will be reduced, and local officials can concentrate their energies and resources on special population groups (the aged, infirm and institutionalized). Sharing should be on a volunteer basis, with no resident forced to accept relocatees. (The November 1979 evacuation of approximately 250,000 residents of Mississauga, Ontario, due to a chemical fire, is a prime

example of relatives and friends accepting a large percentage of the relocated population. Those not accepted by relatives and friends were housed in community centers, schools and meeting halls.)

A major contingency in caring for both relocatees and residents of a host area is the nuclear materials hazard requirement of providing shelter from radioactive fallout. In most host areas, there is a limited amount of such shelter in facilities ranging from home basements to public and private commercial buildings. These contain protected fallout shelter space by virtue of the type of construction. Additional and more effective protection can be achieved by the construction of expedient shelter and by upgrading existing facilities. The construction of expedient shelter and upgrading expedient buildings to improve and increase shelter space is technically feasible, but requires resources, transportation and engineering support. The actions required are described in Section 25.

A major requirement for reception and care operations is to have basic data regarding those facilities to be used for lodging, sheltering, and feeding relocated personnel (and, in some instances, the resident population.) In locations where Community Shelter Plans (CSP'S) have been developed, data on fallout shelters should be available. Where neither shelter data nor facility data needed for congregate lodging and feeding exists, every effort should be made to secure the information from direction and control. If data is not available through channels, it can be obtained by surveying buildings such as schools, churches, public buildings, businesses, etc.

Determining fallout shelter space will require engineering assistance from the municipal public works department or architectural and engineering firms. Lodging and feeding can be accomplished in facilities having proper utilities and sanitation capability.

## 14.3 ORGANIZATION

The chart in Exhibit 14.1 shows a sample organization for the operational management of reception and care activities. The reception and care director should be a qualified administrator capable of organizing and coordinating a cohesive, well staffed, and qualified team. The school system is a likely source of manpower and organization. Thus, the assistant director for reception and care districts might be the district superintendent of schools. The supervisors for registration and assignment could be the registrars or other persons normally involved with recordkeeping duties. School principals are suggested as supervisors of the lodging and shelter complex. Teachers could function as managers of the congregate care facilities. Staff for the feeding and lodging/shelter functions should be selected from hotels, motels, schools, churches, restaurants and other facilities routinely engaged in lodging and feeding activities.

In addition to the organizational functions outlined, various services such as law enforcement, medical and health, fire, RADEF, etc. are performed by the responsible departments or agencies in support of reception and care. Coordination of these services can be at all intermediate levels, depending on evacuation circumstances. In more

demanding cases, it is expected that requirements will be levied through channels for attention and action.

## 14.4 FUNCTIONS

A general statement of functions and responsibilities for the four organizational levels of reception and care follows:

The director, host area reception and care is responsible for overall coordination of reception and care, establishing policy, maintaining liaison with direction and control and other activities, securing personnel and making key district assignments, determining the number of reception and care districts required, activating reception and care operations and ensuring necessary support to reception and care by all agencies and departments.

Assistant directors of reception and care are responsible for the general conduct and support of reception and care district activities. This is the level of management and control that determines the effectiveness of reception and care operations. Registration and assignment, and the recordkeeping requirements of the district, is a critical function -- the central evacuee data bank for all operations. The assistant directors are responsible for establishing policy governing registration and assignment and for operation of the lodging, food and shelter complex. They determine requirements for feeding, lodging and shelter facilities using the total resident and anticipated relocatee population versus local availability of resources. They coordinate with resource and supply, activating facilities, staffing for all operations, and coordinating with all departments and agencies that support reception and care. Where facilities data are not available through direction and control, they conduct building surveys as discussed above. They consolidate and forward requirements for food and essential supplies.

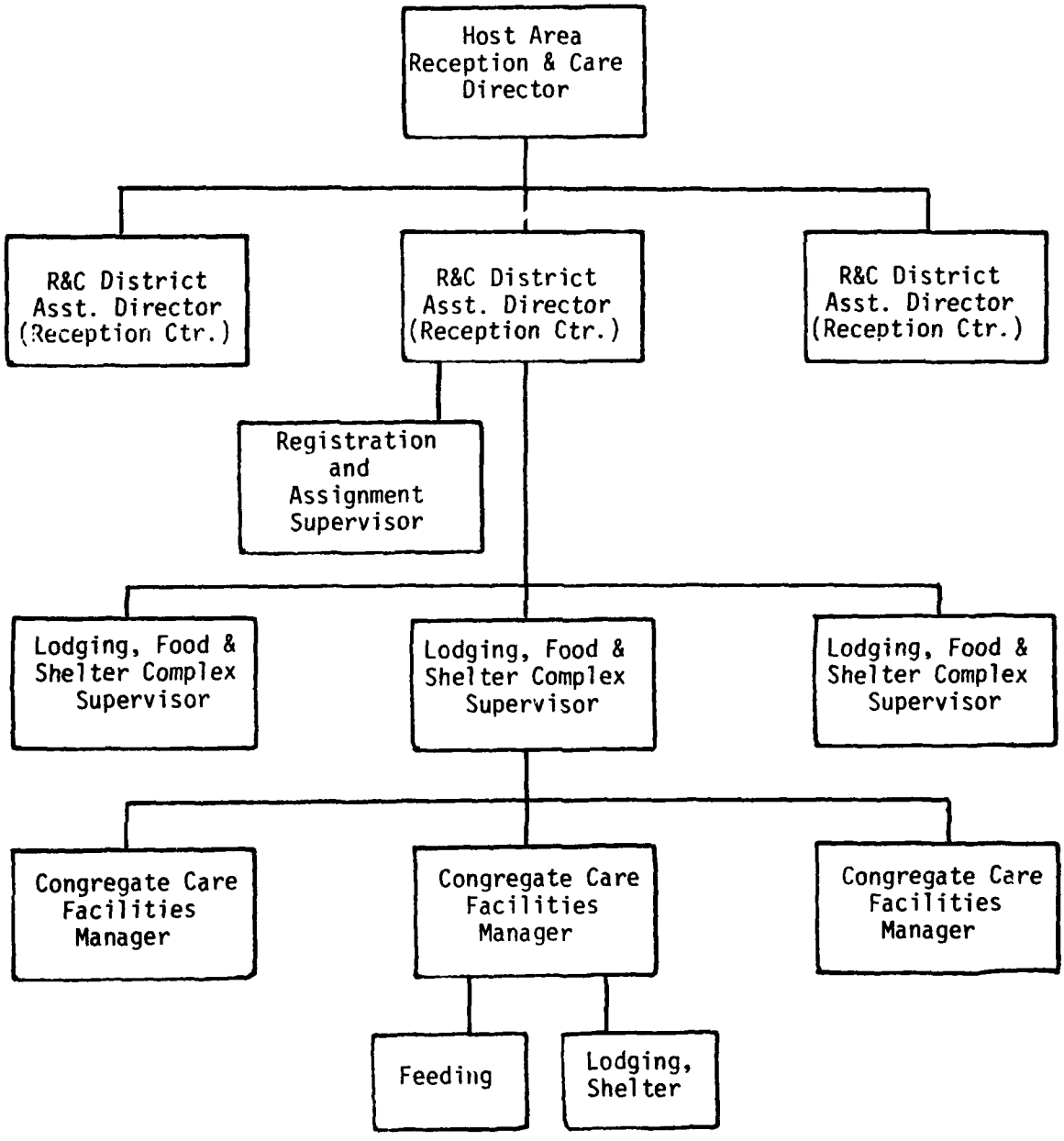
Supervisors for lodging, food and shelter complexes are primarily concerned with establishing policies covering the reception, feeding, lodging and sheltering of relocatees in designated facilities. They coordinate with resource and supply services and other departments to support operations, activate facilities to be used, requisition food and essential supplies, and ensure that shelter food stocks, water, sanitation supplies and other essential supplies are available or requisitioned.

Managers of congregate care facilities are responsible for the end product of reception and care (i.e., the feeding and housing of relocatees and, in some cases, of the resident population). They ensure that the policies and directives promulgated within the reception and

care structure are implemented. They devise procedures for determining requirements for food, water, sanitation, medical assistance, and supplies to support operations. They coordinate and interact with other elements of host area operations at their level to expedite and resolve problems of security, fire protection, supply, etc.

EXHIBIT 14.1

SAMPLE RECEPTION AND CARE ORGANIZATION CHART




(The number of districts, lodging, food and shelter complexes and congregate care facilities may vary depending on the number of anticipated relocatees. Each congregate care facility has a lodging, feeding, and shelter responsibility.)

# 15. RECEPTION CENTER OPERATIONS


15.1 FACILITIES Page 15-1
15.2 ORGANIZATION AND STAFF Page 15-2
15.3 REGISTRATION Page 15-4


## 15.1 FACILITIES

The number of reception and care districts required will depend on the number of relocatees expected in a host area. A reception center is necessary for each district to receive, register, assign housing and feeding locations, and provide general information, such as use and parking of relocatee vehicles, locations of hospitals, and special services for the aged, infirm, and handicapped. Reception centers should be located near major ingress routes to the host area. Locations of reception centers should be plotted on maps of the host area and provided to risk area officials to allow for orderly and coordinated movements into the area. Locations of the centers must also be clearly posted on all access roads into the jurisdiction. (See Section 11, Law Enforcement)

Local judgements, based on coordination with risk area officials regarding number and categories of people to be relocated and personal knowledge of local capabilities, will enable officials to determine the required number and locations of districts and reception centers.

Reception centers can be located in school facilities, county and city buildings, churches, etc. Accessibility and ease of locating are prime considerations along with capability of sustaining operations over a period of time.

## 15.2 ORGANIZATION AND STAFF

Organization and staffing of reception centers should be pre-planned when possible. Recruitment, orientation, training, and assignment of staff should be accomplished prior to an emergency for maximum effectiveness, but this may not be possible. In an emergency, developing a staff and management structure should be a first priority task for the assistant director of each reception and care district.

If the nucleus of an organization exists at the outset of a crisis, the chances for a successful operation are enhanced. The assignment of assistant directors to coordinate district services, including operation of the reception center and lodging, food and shelter complexes, should be given high priority by local officials. The superintendent of schools or the county director of social services are logical candidates because of their managerial skills and because they have professionals under their jurisdiction who should be able to perform well in reception and care operations. A framework for management exists and should be fully exploited. A supervisor should be appointed for each of the reception centers, and assistant supervisors for lodging, feeding, and fallout shelters. (With these top positions filled, it would be possible to conduct crisis oriented training for all reception center

staff based on position assignments.) The school district business administrator or registrar would be a logical selection for the reception center supervisor.

District assistant reception and care director activities at the reception centers include:

- In conjunction with the resource and supply service, prepare the reception center for use (rearrange existing contents, obtain desks and tables, chairs, and office equipment and supplies), and move into operating areas.
- Notify all individuals designated for reception center operations to report for duty.
- Obtain forms to be used in the reception centers. These should be rapidly reproduced and distributed and headings filled in, so as to be available when the first relocatees arrive.
- After all relocatees are processed, the reception centers should consolidate the data from the forms and keep them up-to-date.
- Detailed activities of the various elements of the reception centers are described in the following paragraphs.

A suggested reception center organizational chart, which considers three reception centers serving three reception and care districts, as approximating the needs of a host area scheduled to receive about 40,000 relocatees is presented in Exhibit 15.1. Each of the five registration sections should be staffed with two persons per shift, or six persons for 24-hour operations.

## 15.3 REGISTRATION

The process of registering people in a reception center and assigning families and individuals to congregate care housing, feeding, fallout shelter and other services requires various forms and schedules in order to effectively control the situation and maintain accountability. Pre-registration in the risk area would facilitate the reception process. However, the timing and coordination required could complicate planning. Exhibit 15.2 presents copies of suggested forms. Once emergency evacuation notification is received, sufficient copies of each form should be reproduced and distributed to each reception center to meet requirements. An advance determination of requirements should be made when possible, including local modification of suggested forms to support local information needs, organization and staffing.

### Section 1: Family/Individual Registration

Personnel in Section 1 should complete Form 1 (Family/Individual Registration), except Item 9, which will be filled in after lodging assignments are made.

### Section 2: Lodging (Congregate Care)

Personnel in Section 2 should complete Form 2 (Lodging Tally) and, simulanteously, Form 3 (Lodging Assignment Log), and initiate Form 8, including completion of Lines 1 and 2.

Each reception center is allocated a block of congregate care facilities to which they will assign relocatees. One Form 2 will be maintained for each congregate care facility, volunteer residence or privately owned RV. Use of this form will preclude exceeding the capacity of a particular lodging facility., As lodging, and possibly eating space, is volunteered by residents, the information will be channeled to the reception and care districts. In turn, it will be passed on to the assistants for lodging or feeding, as appropriate.

During the registration process, one of the individuals should be constantly checking the Lodging Tally (Form 2) and entering information from it onto the Lodging Assignment Log (Form 3). In this way, the registration center can maintain an orderly record of vacancies in the

various lodging facilities and be able to assign incoming families without overcrowding a specific facility. It will also allow the registration center to know at a glance the status of their lodgings.

Section 3: Food Operations

Personnel in Section 3 will complete Form 4 (Mass Feeding Tally) for each feeding facility and simultaneously Form 5 (Mass Feeding Log) and Line 3 of Form 8. Line 3, in addition to showing the eating facility, will show which meal (1 through 15) each individual will eat. The meal periods are as follows:

| A.M. | P.M. |
|---|---|
| 6:40 (Meal 1 AM) | 2:20 (Meal 1 PM) |
| 7:00 | 2:40 |
| 7:20 | 3:00 |
| 7:40 | 3:20 |
| 8:00 (Meal 5 AM) | 3:40 (Meal 5 PM) |
| 8:20 | 4:00 |
| 8:40 | 4:20 |
| 9:00 | 4:40 |
| 9:20 | 5:00 |
| 9:40 (Meal 10 AM) | 5:20 (Meal 10 PM) |
| 10:00 | 5:40 |
| 10:20 | 6:00 |
| 10:40 | 6:20 |
| 11:00 | 6:40 |
| 11:20 (Meal 15 AM) | 7:00 (Meal 15 PM) |

Section 3 may also issue one commercial ration card (if states do not provide locally) properly filled out. including the name of the feeding facility immediately under the title of the card. (See Food Operations, Section 17)

Section 4: Fallout Shelter

Personnel of Section 4 will complete Form 6 (Fallout Shelter Tally) for each fallout shelter facility and, simultaneously, Form 7 (Fallout Shelter Log). Also Line 4 of Form 8.

Section 4 of each reception center is allocated groups of fallout shelter facilities to which they will assign relocatees. Assignments should be made so as to require minimum movement of the relocatees from lodging facilities. That is, if the congregate care facility is also to be a fallout shelter, assign relocatees to it or as close as possible.

Each jurisdiction should develop a list of fallout shelter facilities using any available Community Shelter Plan (CSP) data as a basis. In the absence of such data, all major buildings should be listed by name, address and the approximate shelter spaces based on a 10 square foot requirement per person minimum. To qualify as a fallout

shelter, structures should be of heavy construction material (e.g., brick, stone, masonry) and have basements and core areas affording protection. Assistance in determining the availability of structures as shelters should be requested from state and federal officials as possible.

Section 5: Family/Individual Assignment & Miscellaneous

Personnel of Section 5 will complete all remaining parts of Form 8 (Family/Individual Assignment Tally) as follows:

1. Line 5: Show the facility to which relocatees can go for needed medical help (first aid or clinic-type assistance). Medical facilities will be limited in number, so information regarding them should be readily available to reception centers at the onset of any alert.

2. Line 6. Show the parking areas in which lodging facilities are located (sometimes this may be on-street parking).

3. Line 6. If the relocatee family/individual has a recreational vehicle, assign them to mobile home parks if space is available or in parking areas near water, electricity, sanitation facilities, etc.

4. Line 7. Assign self-service laundries as available (preferably one close to lodging).

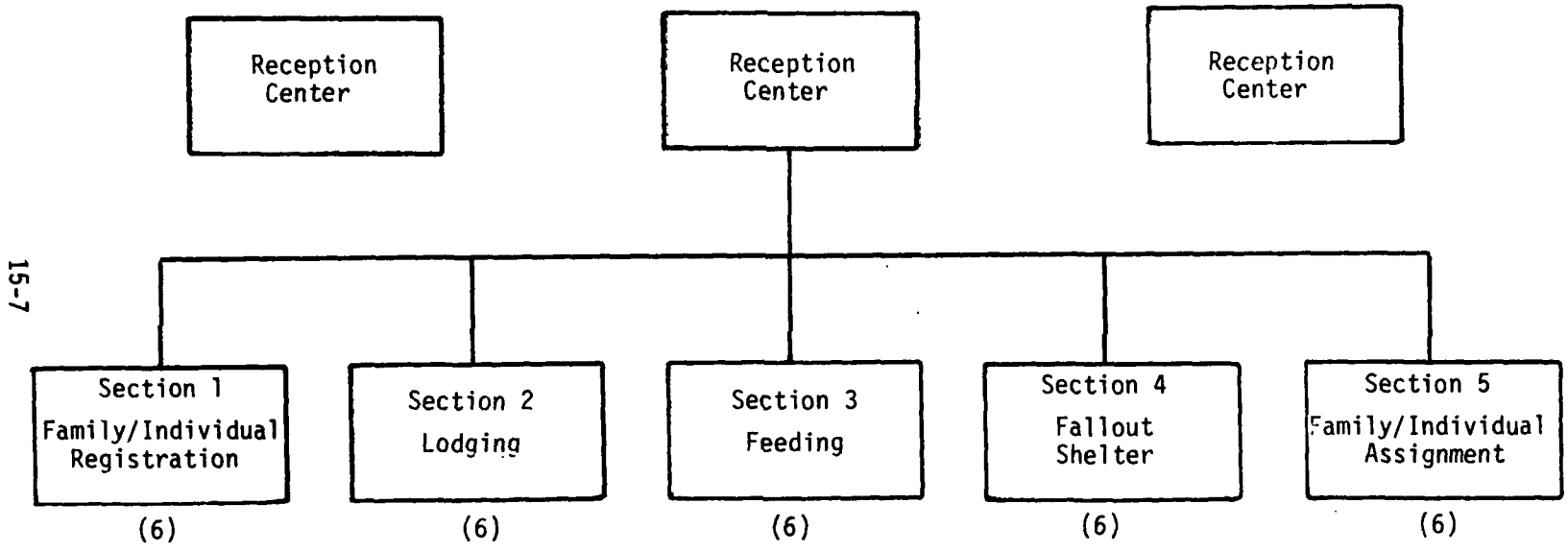
5. Line 8. All individuals should be screened to determine work skills (also see Item 15 of Form 1). Necessary skilled augmentation personnel (cooks, pharmacists, nurses, etc.) can be determined and assignments made as needed.

6. Line 9. Any unusual information gained by querying relocatees should be entered in the "Comments" portion of Form 8, and also noted on Form 1, which will be filed in the reception center.

7. Lines 10 and 11. The individual completing Form 8 will fill in this information before giving the assignment tag to the family/individual relocatee.

EXHIBIT 15.1

RECEPTION CENTER ORGANIZATION




NOTE: The three suggested reception centers are each organized into five sections. (The reception centers can all be located in one city or in various cities of a county.)

The circled number beneath each section represents the suggested staffing for 24-hour operations.

EXHIBIT 15.2

RECEPTION CENTER FORMS

Forms 1 through 8 are attached as suggested samples to be reproduced distributed to reception centers rapidly once the crisis relocation alert is received.

FORM 1: Family/Individual Registration Form

FORM 2: Lodging Tally

FORM 3: Lodging Assignment Log

FORM 4: Mass Feeding Tally

FORM 5: Mass Feeding Log

FORM 6: Fallout Shelter Tally

FORM 7: Fallout Shelter Log

FORM 8: Family/Individual Assignment Tag

FORM 1 - Family/Individual Registration Form

Reception Center Name/Location _____ Date _____

1. Family Name (Print)

9. Emergency Housing Address-Building or Number and Street _____

Phone Number _____

10. Pre-Emergency Address _____

City

| Members of Household with same Family Name (Fill out a separate form for each member of household with different family name). First Name / Middle Name or Initial | 11. Sex M | 11. Sex F | 12. Age | 13. Blood Type | 14. Social Security Number | 15. Occupation or Skill |
|---|---|---|---|---|---|---|
| 2. Man | | | | | | |
| 3. Woman | | | | | | |
| 4. Children | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |

16. Comments _____

17. Information furnished by _____

18. Form completed by (Name) _____

FORM 2 - Lodging Tally

LODGING TALLY

Facility _____ Number _____

Date _____ Reception Center at _____

SPACES AVAILABLE _____

| No. Assigned | Time | Balance | Remarks |
|---|---|---|---|
| | | | |

FORM 3 - Lodging Assignment Log

LODGING ASSIGNMENT LOG

Reception Center at _____ Date_____ Page _____

| CRP No. | Address | Building or Resident Name | Space Available | Space Assigned | Relocatee Family or Individual Name & Home Address |
|---|---|---|---|---|---|
| | | | | | |

FORM 4 - Mass Feeding Tally

MASS FEEDING TALLY

Facility _____ Number _____

Date _____ Reception Center at _____

FEEDING CAPABILITY (Each 5-hour meal period) _____

| No. Assigned | Time | Balance | Remarks |
|---|---|---|---|
| | | | |

FORM 5 - Mass Feeding Log

MASS FEEDING LOG

Reception Center at _____ Date _____ Page _____

| CRP. No. | Address | Building or Resident Name | Space Available | Space Assigned | Relocatee Family or Individual Name and Home Address |
|---|---|---|---|---|---|
| | | | | | |

FORM 6 - Fallout Shelter Tally

FALLOUT SHELTER TALLY

Facility _____ Number _____

Date _____ Reception Center at _____

Shelter Capacity _____

| No. Assigned | Time | Balance | Remarks |
|---|---|---|---|
| | | | |

FORM 7 - Fallout Shelter Log

FALLOUT SHELTER LOG

Reception Center at _____ Date _____ Page _____

| CRP No. | Address | Building or Resident Name | Space Available | Space Assigned | Relocatee Family or Individual Name and Home Address |
|---|---|---|---|---|---|
| | | | | | |

FORMS 8 - Family/Individual Assignment Tag

1. NAME _____ HOW MANY _____
2. LODGED AT _____
3. EAT AT _____
4. SHELTERED AT _____
5. FIRST AID AT _____
6. PARKING AREA AT _____
7. LAUNDRY AT _____
8. WORK AT _____
9. COMMENTS (Issue Relocatee Flyer (EPI) with this Tag and query family/individual as to status of health (illness, medicines being used, etc., and refer to the Medical & Health personnel in the Reception Center, if they have not yet been checked).

_____

_____

_____

_____

_____

_____

_____

_____

10. RECEPTION CENTER NAME _____
11. TELEPHONE NUMBER _____

# 16. LODGING ORGANIZATION AND OPERATIONS

16.1 ORGANIZATION Page 16-1
16.2 PROCEDURES Page 16-3

## 16.1 ORGANIZATION

The overall reception and care organization to manage the various activities and operations for the host area is described in Section 14. This section describes a suggested organizational structure for the lodging function at district and lower levels. Each host area will have individual considerations based on facility and service distribution. These considerations may modify the reception and care organization. Lodging allocations should be integrated with the other operational elements of the host area to achieve maximum effectiveness.

In addition to lodging, feeding and shelter facilities, the reception and care division or lodging headquarters staffs will be responsible for providing sanitation (laundry and bathing facilities), local transportation, bedding and clothing, and recreational and religious services. Procedures and operations of these services must be determined locally by the best match of available resources with evacuee requirements.

The location of congregate care facilities where evacuees are housed is the major determinant of most other elements of host area

operations, such as movement control, police, fire and medical services, and resource distribution. Housing relocatees in buildings with internal food facilities and fallout protection is an obviously good policy, reducing movement distances. Care should also be taken to assign special groups of people (babies, ill, aged, handicapped) to facilities capable of providing the extraordinary services required.

It is probable that a large number of relocatees will be lodged and fed in houses of relatives and friends, and in other volunteered space, particularly during natural disasters. However, because of the uncertainties of volunteered space, all expected relocatees should be allocated space in congregate care facilities. Blocks of congregate care facilities with available spaces are assigned each of the reception and care districts. As indicated in Section 14, a survey of a sufficient number of facilities (hotels, motels, stores, schools, churches, warehouses, offices, etc.) is necessary to develop a list of congregate care facilities which includes the name of the facility, its address, and the number of congregate care spaces in the building. Each space should be considered at 40 square feet. The lodging section (Section 15) of each of the reception center will assign relocatees to congregate care facilities.

## 16.2 PROCEDURES

In order to function effectively, the following procedures are suggested. Some of the procedures depend on the amount of time available before evacuees arrive and on the level of pre-planning that may have been possible.

- Activate the lodging section headquarters and congregate care facilities and staffs. If staff assignments are not prearranged, appoint school principals and teachers or other appropriate personnel.
- Initiate procedures to close certain businesses and to ready congregate care facilities to receive relocatees.
- Publicize through press and radio the need for volunteer space in homes. (Coordinate with the PIO.)
- Make last-minute facility, staff and organization adjustments to fit evacuation requirements and expedite operations.
- Conduct orientation and training to familiarize personnel with probable activities to the extent possible.
- Request law enforcement, fire, and medical and health services to establish coordination procedures to support lodging section headquarters and congregate care facility operations.
- Congregate care staffs should, under direction of lodging section headquarters personnel, ensure that all relocatees know their feeding and fallout shelter locations. They should also be prepared to instruct and inform relocatees of hazard and preparedness conditions, operating rules, and special services available.

# 17. FOOD OPERATIONS


17.1 OPERATIONS Page 17-1
17.2 ACCOUNTABILITY Page 17-2
17.3 PROCEDURES Page 17-3


## 17.1 OPERATIONS

Many relocatees will eat in commercial or institutional food serving (mass feeding) facilities. There may be a few residents who will also use these facilities. As explained in Section 15, there should be two five hour meal periods daily, during which three groups of relocatees will be fed per hour for a total of 15 groups (20 minutes per meal). All meals will be cafeteria style, austere, and featuring rapidly prepared, bulk style dishes, such as scrambled eggs (A.M. meal) and hash or stew (P.M. meal). Frequent cold meals are possible.

Some relocation guidance indicates that relocatees should be advised by risk area officials to bring as much food with them as possible. This would materially assist host area operations by not having to draw down on local supplies initially, and would also provide some breathing time to organize reception and care food operations. On the other hand, few families have stocks of the types of food required, and storage (spoilage) could be a problem. Most important is that evacuees bring supplies of special foods (and drugs and hygienic supplies) to meet individual needs.

A survey should have been conducted, and a list made of all facilities (restaurants, hotels, churches, service/fraternal clubs, etc.) that have a capability for providing food service. The list should give the name of the facility, its address, and its capacity. These data should then be provided to the district registration center so that assignments can be made at the time of registration (Section 15).

## 17.2 ACCOUNTABILITY

No one should be denied food for lack of cash, which should not be used in institutional facilities. It is suggested that the assignment tag (Section 15, Form 8) be used to identify evacuees. The establishment would keep simple counts of meals served for accountability. Some states are prepared to issue ration cards for food control. Where states do not plan to issue ration cards, local jurisdictions may wish to do so using the format suggested below, or possibly some other control system. A sample ration card is shown in Exhibit 17.1.

Some states have emergency budgets to alleviate costs resulting from disasters. The federal government may also assist in covering costs. Claims for costs incurred by mass eating facilities should be based on the number of meals served. Records can be maintained in conjunction with the use of ration cards or whatever control system is established by federal or state government. Effective recordkeeping will expedite payment once the evacuation is over. Procedures should be

developed to ensure that those facilities selected for food service can secure food supplies adequate to feed the number of assigned relocatees (Section 20).

## 17.3 PROCEDURES

For the food operations to function effectively, the following procedures are suggested. Some will depend on the amount of preparation time available before relocatees arrive.

- Activate and staff available food facilities, ensuring each listed facility is currently available.
- Determine transportation requirements for those evacuees lodged too distant to walk to food facilities. Also, consider inclement and harsh weather for mothers with young children, aged, and infirm, and other categories of people not capable of walking. (These people should have been screened at time of registration and assigned to lodging having a built-in feeding capability, but this may not have been possible.)
- Establish a schedule for health and sanitation inspections of food facilities by the medical and health service. If possible, the first inspection should precede the initiation of meal service.
- Establish a schedule for fire safety measures for food facilities by the fire service. If possible, the first inspection should precede the initiation of meal service.
- Notify all food stores to prepare to receive, store, and distribute food supplies provided by the host area resources plan (Section 20).
- Ensure that reception center personnel screen relocatees for cooks and food handlers and that assignments are made to food facilities to augment existing staff. Requirements should be established by facility managers.
- Where ration cards provided by the state are used, ensure their availability so they can be issued during processing at the reception center. If locally designed cards are to be used, reproduction and distribution to reception center should be expedited.

- Publicize the fact (by radio, television, newspapers) that food facilities are available for residents unable to prepare meals, and that ration cards (or other identification) can be secured at the nearest reception center.

Establishing food serving facilities will provide for the relocatees, but a further problem will be the continual need for local residents and for relocatees not using food facilities to be supplied with food and related services. The influx of relocatees can be expected to strain the capacity of retail stores to meet both institutional and resident food requirements. It may be necessary to issue a food shopper's ration card to be used at retail outlets. While rationing may be necessary in some local areas (due to supply system breakdown), caution should be exercised before implementation because of complex, difficult management and enforcement problems. Some states may provide such a card. If not, local governments may produce their own. The sample ration card in Exhibit 17.2 contains blocks number 1 through 120. It is suggested that Blocks 1 through 100 be used to obtain food allocations at retail stores. Blocks 101 through 120 can be used to obtain health and personal hygiene items.

After the emergency evacuation is announced, the reception and care director should take certain suggested actions to ensure an effective food operation:

- Where state plans provide for a food ration card of any type, ensure that an adequate supply is secured for the host area, and that they are distributed to reception center. If not available from the state, they may be produced locally.
- Conduct information programs for residents and retail store personnel explaining food purchase procedures and how and where to secure the food ration cards. A continuing program will be necessary during the term of the emergency.

- Alert retail stores when to start use of the cards. If the state institutes a non-cash payment system, advise the host area population that no one is to be denied rations because of lack of cash. Advise store managers of the need to maintain records to substantiate future claims for reimbursement.

EXHIBIT 17.1

SAMPLE MEAL RATION CARD

RATION CARD NO.

STATE OF _____ BOARD NO. ____ TYPE __

VALID FOR ___ _____ BEGINNING 7/1/
(NO.) (ITEMS) (DATE)

ALLISON FRED JAMES
LAST NAME FIRST MIDDLE

MADISON 840 22022
STREET NUMBER ZIP-CODE

Fred J. Allison
SIGNATURE OF REGISTRANT

(STAMP OR SEAL OF ISSUING AUTHORITY)

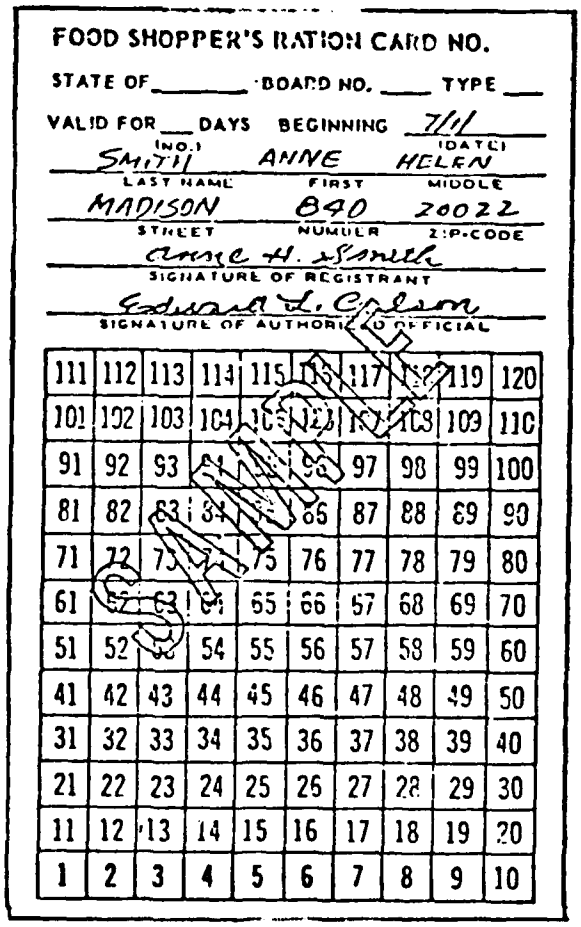
SAMPLE

BY: Edward L. Carlson
AUTHORIZED OFFICIAL

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

EXHIBIT 17.2

SAMPLE SHOPPER'S RATION CARD



FOOD SHOPPER'S RATION CARD NO.

STATE OF _____ BOARD NO. ____ TYPE ___

VALID FOR ___ DAYS BEGINNING 7/11
(NO.) (DATE)

SMITH ANNE HELEN
LAST NAME FIRST MIDDLE

MADISON 840 20022
STREET NUMBER ZIP-CODE

Anne H. Smith
SIGNATURE OF REGISTRANT

Edward L. Carlson
SIGNATURE OF AUTHORIZED OFFICIAL

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

# 18. FALLOUT SHELTER ORGANIZATION AND OPERATIONS


| | |
|---|---|
| 18.1 OPERATIONS | Page 18-1 |
| 18.2 ORGANIZATION AND STAFF | Page 18-3 |
| 18.3 PROCEDURES | Page 18-5 |
| 18.4 EXPEDIENT SHELTER | page 18-6 |


## 18.1 OPERATIONS

Some emergency evacuation conditions (involving nuclear materials) will subject both host and risk areas to possible hazardous effects of nuclear radiation. These effects are discussed in Section 6 on Radiological Defense. Achieving additional spaces by upgrading existing buildings is covered in Section 25 on Fallout Shelter Upgrading. The concluding portion of this Section discusses the development and use of expedient shelters.

Risk areas are generally considered to have adequate fallout shelter capacity for people remaining in the area and who might be present at the time of fallout arrival. Most probably risk area governments will have been involved in Community Shelter Planning as one countermeasure policy was to take shelter where a person worked or lived rather than to evacuate as is current policy. Any risk area which has not been involved in CSP can apply the organizational and operational functions set forth in this Section to their specific situations.

This discussion of shelter organization and operations presupposes that fallout shelter space exists in the host area. that the space has been located and identified, and that these shelter data is compiled in some usable form. For a community to have a viable fallout shelter operation, several criteria must be met. The following are considered indispensable to an effective operation:

- Fallout shelter space should be available to all residents and relocatees either through space in existing structures, through the construction of expedient shelter, or by upgrading and improving space in existing buildings.
- A minimum of ten square feet of fallout shelter space is required for each person.
- Shelter space must be adequately ventilated.
- Food, water, health care, communications, fire protection, law enforcement, sanitation, information services, recreation, religious activities are all essential elements associated with sheltering the evacuee and resident population.
- Each facility designated as a fallout shelter must have an assigned shelter manager with support for all elements enumerated in the preceding list of support activities and considerations.
- Shelter management functions and responsibilities are described in existing federal publications, supplemented by state and local government directives or guidelines. (A shelter management handbook or some form of instruction should be available in each fallout shelter.)
- If a CSP has been accomplished for a host area, the CSP data should be used and updated when possible.
- If no CSP exists in a host area, a list of all shelter facilities should be compiled, including the location and number of spaces. The extent of food and water support should be cited. Medical support and other vital information should be included.
- Shelter space data must be made available to the reception and care district director on a timely basis so that shelter assignments can be made at the time of registration. (Where expedient shelter construction and upgrading is necessary, assignments for all evacuees will not be possible at time of

registration.) Assignments will be made while people are in congregate care facilities.) Movement distances from congregate care facilities to fallout shelters should be minimal.

- If a CSP exists, evacuation plans may change space assignments for the resident host area population. If the original CSP was publicized, resident populations must be advised as to the location of their new fallout shelter. This should be done by the PIO.

- When time permits (especially where no CSP exists), assistance in developing a plan for protecting both relocatee and the resident population should be requested from regional, state, and federal authorities as appropriate.

## 18.2 ORGANIZATION AND STAFF

The activities and duties of shelter management are defined in shelter management handbooks and other guidance. As suggested above, these materials should be available in all designated shelters. If not, the following list of functions and responsibilities may be used:

- Shelter manager. Responsible for coordinating all activities necessary for shelter living, including the selection and training of staff and coordination with shelter complex headquarters.

- Registration and general information. Responsible for registering and keeping records on all shelter occupants.

- Communications and Supplies. Communications, probably telephone and radio, will be essential for coordinating shelter functions. Reports on radiation intensities need to be communicated by control stations. Supply activities will mainly concern supplies of food, water, heat, ventilation, bedding, and related living requirements (all of which will probably be in short supply). Judicious action will be necessary to ensure the equitable and effective use of on-hand and resupplied provisions.

- Radiological defense. The major objective of sheltering is that occupants receive the best possible protection from radioactive fallout. Occupants may need to be rotated within the shelters to average out radiation exposure. Persons entering shelters who have been exposed to fallout will require decontamination.

- Health and sanitation. Medical and health officials will be responsible for the general health and well-being of shelterees. In crowded facilities, sanitation can be a major problem and will require close surveillance and inspection procedures. Close living can also increase the incidence of health problems. Depending on the quality of the shelter and individual occupants' exposure to radiation, sickness and death can be expected. Proper disposition of the dead will be necessary.

Staffing the shelter complex headquarters should be the responsibility of the reception and care coordinator. Each shelter complex supervisor is in turn responsible for the selection and assignment of shelter managers for each fallout shelter. Shelter managers will be responsible for selecting their assistant managers and other staff. All staffing, if not assigned before the crisis relocation emergency, should be coordinated with the district reception and care director to secure the best qualified assistance available.

Training of shelter staff may not be possible (depending on the time available), so it is highly desirable that the best qualified people are selected to fill all positions. Also, advantage should be taken of published guidance -- particularly shelter management handbooks and related materials -- to orient and train personnel in their respective duties. Accelerated training can be accomplished after fallout shelters have been opened and occupied.

## 18.3 PROCEDURES

After the emergency evacuation involving nuclear hazards has been announced, the reception and care director, assisted and advised by the key direction and control and reception and care personnel, should take action to:

- Notify all shelter personnel to report for duty;
- Coordinate with resource and supply services to ready fallout shelters for occupancy;
- Designate shelter managers who should conduct briefings and orientation sessions to advise on shelter activities and assist in selecting other operations personnel;
- Coordinate with resource and supply services on shelter upgrading requirements and operations; and
- As facilities are upgraded, prepare them for shelter use.

When information is received to occupy fallout shelters, the following actions should be taken:

- Advise relocatees and residents to occupy designated shelters. This action should be based on a directive from the chief executive of the host area or the mayors of cities.
- Shelter management should take actions outlined in shelter management handbooks or other guidance placed in shelters. Where guidance information is not on hand in shelters, the shelter manager should accomplish the functions (outlined earlier) to the degree possible.

## 18.4 EXPEDIENT SHELTERS

The development and use of expedient shelters may be necessary where shelter deficits of a community cannot be compensated by upgrading or improving space in existing buildings. Expedient shelter is the least desireable form of shelter as it can be more expensive to construct than upgrading existing buildings and it generally will provide less protection, and occupants will find it less desireable for obvious reasons. However, it may be the only option available for a portion of the population.

Development of expedient shelter generally involves the use of excavating and covering techniques using readily available materials and equipment. It is anticipated that construction of expedient shelters would be necessary during a three day crisis period that might develop due to a sharp deterioration of international relations.

Various studies and experiments have shown that within the anticipated three day crisis build-up period, it would be possible for individual or groups of families to manually construct expedient type shelters affording protection factors of 200 or more. (Occupants would be 200 times better off in such shelter than in a fully exposed area.)

There are various types of shelter which can be constructed. Some consist of open trench type of excavation which is eventually covered or provided with structural members supporting a shielded roof. Others are built above ground using a structural frame (timber, logs, etc.) which is covered using a structural frame.

Although equipment envisioned for host area tasks would be adaptable to digging trenches and placing backfill and shielding for expedient shelters, there are certain obvious restrictions to be considered. Trenches would not be dug in rock formations or where the water table is near the ground surface. Some earth formations, even when essentially dry, will not stand on vertical cuts without continous bracing. Equipment may bog down in swampy or wet areas.

Assistance on design and construction or expedient shelters may be required. The state or state/regional offices should be contacted for

assistance. Local engineers can provide valuable assistance and possible sources for equipment and personnel to accomplish the work.

The logistical requirements necessary to support people in expedient shelter are similiar to requirements for other types of shelter occupancy, but individual occupants may have to rely more on their own ability to provide food, water, sanitation, medical and other supplies required. This supports the earlier contention that expedient shelter is the least desirable type of fallout protection but may be the only alternative to saving lives from over exposure to the hazards of radioactive fallout.

# 19. RESOURCE AND SUPPLY ORGANIZATION

19.1 MISSION Page 19-1
19.2 MANAGEMENT Page 19-3

## 19.1 MISSION

The purpose of this section of the guide is to define and explain resource supply and service elements essential to host area operations. A management system for these resources will be required to sustain both the resident and relocatee population during the emergency evacuation. The essential resources and services are generally considered to be in the areas of:

- Food supplies and shelter stocks, including water and sanitation items;
- Medical and health supplies, including drugs and pharmaceuticals;
- Petroleum products;
- Utilities;
- Transportation;
- Construction products required primarily for upgrading facilities to improve fallout shelter capabilities; and
- Construction equipment (cranes, trucks, bulldozers, power shovels);
- Radiological decontamination.

This list should not be construed as mandatory or all inclusive. Some communities may, for various reasons, want to either expand or reduce the functions due to requirements peculiar to their jurisdiction or to the emergency conditions. Certain types of supplies and equipment, such as those required for radiological defense, public safety, and reception and care will be the responsibility of designated officials in their operational areas. The responsibilities of designated officials and their relationships with resources and supply services will be subject to local laws and conditions.

Where emergency evacuation operations involve few people for short time periods, normal distribution channels may be sufficient. However, for more severe conditions, local officials may be required to provide residents and relocatees with essential resources and supplies for a period of two weeks or more. Sources of resupply must be established to compensate for a cutoff period or interruption of regular sources of supply. Coordination with state and risk area officials should materially assist host officials, reducing the magnitude of their resource problems. This can be particularly significant in host areas receiving a high ratio of evacuees to residents and also where the host community may, under normal conditions, experience resupply problems for certain resources. As pointed out in Section 2, a characteristic of all disasters is that they introduce higher degrees of uncertainty and vulnerability.

## 19.2 MANAGEMENT

To effectively manage resources during a major emergency evacuation, local officials should decide how best to conserve their resources deemed to be most critical to population survival. Early consideration is recommended for questions of controls, priorities, and shutdown of non-essential businesses and industries. If pre-planning for resource management has not been accomplished, it is suggested that a resource control group be formed for this purpose. A resource and supply coordinator should be appointed to coordinate host area activities and negotiate with the state and risk area officials. Implementation of emergency management policies can probably be best accomplished by those officials charged with the activities on a day-to-day basis. (Exceptions are fallout shelters and radiological decontamination, which are not day-to-day concerns of most local governments.)

Considerable resource management planning, including fiscal and procurement policies and procedures, have been accomplished by many states in conjunction with the federal government. In turn, many localities have received state guidance, and may have incorporated it in local plans. Where guidance has not been incorporated or is not relevant to the emergency evacuation conditions, Sections 20 through 26 of this guide may be helpful.

It is anticipated that risk area governments will support host areas to the maximum and in accordance with State and Federal resource guidance and directives. Because of reduced requirements for resources,

occasioned through the relocation of risk area populations, adequate resources should be available to the risk area to support any residual activities. Supply procedures followed on a day-to-day basis should meet risk area resource requirements.

# 20. FOOD SUPPLIES AND SHELTER STOCKS


| | |
|---|---|
| 20.1 REQUIREMENTS | Page 20-1 |
| 20.2 PROCEDURES | Page 20-2 |
| 20.3 SHELTER STOCKS | Page 20-4 |
| 20.4 OTHER SUPPLIES | Page 20-5 |


## 20.1 REQUIREMENTS

The requirement for food supplies for feeding in congregate care facilities, private homes, campers and trailers, plus stocks of food, water and miscellaneous supplies for fallout shelters is expected to strain the acquisition and distribution systems of any host area. Hoarding, dislocation, and interruption of distribution systems, implementation of freeze orders levied by the state, runs on retail stores, and other disruptions resulting from the emergency situation can further aggravate local problems in dealing with food and shelter stocking operations. Thus, the management of food supplies may be a critical concern for host area officials. Overall production, allocation and distribution is a state responsibility.

The relocation of people from risk areas to host areas dictates that the major emphasis be on providing available food supplies and shelter stocks to host areas. Risk areas are expected to provide maximum support by diverting all possible supplies and stocks to host areas. Resupply of host areas from areas at risk will follow supply and distribution procedures in being but as modified by emergency plans of

the State and Federal governments. Risk area requirements during periods of relocation, or to provide for segments of the population not evacuated for any reason, should be minimal and can be drawn from general day-to-day sources of supply.

From the standpoint of morale in an emergency evacuation, it would seem desirable to supply people the full scope of food, convenience and other items they are accustomed to buying through the retail food system. However, some tradeoff may be necessary in deference to the emergency. Survival is the ultimate objective, and nutrition is a dominant element. After initiation of evacuation, the resource and supply coordinator, with assistance from appropriate elements of the emergency organization, may be required to assume responsibility for the control of all food on hand in retail and wholesale outlets, and to establish or implement a system of supply and distribution controls to ensure equitable usage among residents and relocatees. Close coordination with local government officials is essential to designate priorities and management policies that impact food and shelter stocks.

## 20.2 PROCEDURES

The following procedures for ordering, receiving, storing, distributing, and accounting for food and associated items, shelter stocks, and supplies are suggested:

- Implement actions initiated by state or local officials to minimize bulk purchase hoarding of foodstuffs by residents. Recommend limits as to the quantities of foodstuffs and associated items that can be purchased.

- Effect coordination with risk areas to ensure that relocatees are advised to bring at least a three-day food supply with them (Section 17).

- Establish liaison with wholesale distributors and develop procedures for delivery of bulk shipments to designated locations (warehouses, cooling facilities, etc.). Care should be taken to prevent double-handling to save time and transportation.

- Determine through reception and care which restaurants, schools, churches, etc. will be used for relocatee feeding. Set up storage locations most suitable for distribution and security.

- If necessary, terminate or regulate automatic food supply operations in force and have deliveries made in response to requisitions or orders to wholesalers on a scheduled delivery basis, thus tailoring the receipt of supplies to the emergency.

- Base food requisitions on the total population, both resident and relocatee. The National Emergency Food Allowance Tables shown in Exhibits 20.1 and 20.2 offer guidance on quantities of various food types on an amount per week per individual basis. Substitute foods are also listed. Care will be necessary to ensure that equitable amounts of the various food types are allocated.

- The largest increase in food supply requirements will be for institutions feeding the relocatees. Therefore, food supply stocks to many retail outlets may be reduced. Recommendations to close or reduce the operating hours of restaurants and other operations not used for feeding relocatees may be in order.

- Coordinate with reception and care services for food orders and delivery procedures. Arrange for breakdown of bulk supplies and their delivery to food supply points.

- Ascertain the number of relocatees living in private homes, mobile homes, campers and trailers (from reception and care) to determine more precisely the impact on retail outlets.

## 20.3 SHELTER STOCKS

- It may be necessary to expedite determination of shelter stocking requirements, where stocks should be located, and who will be in charge of their safekeeping and distribution.

- Shelter food stocks should be stockpiled in sufficient quantities to feed both residents and relocatees in the event of fallout operations. Containers for drinking water and sanitation will also be required. (Drinking water is the most critical item for survival in a shelter; the minimum recommended amount is three and one half gallons per person for a two week period, or one quart per person per day.)

- Feeding shelter occupants should be on the basis of two austere meals per day. Suggested menus, using a per meal caloric base, are attached as Exhibit 20.3. The chart reflects two menus geared to 100 servings. Exhibit 20.4 shows alternative servings. These menus allow for approximately 1050-1100 calories per day. The minimum recommended amount is 700 calories per day.

- As a minimum, shelter food stockpiling should begin when shelter upgrading is initiated.

- The amount of water to be stockpiled will be determined in part by the amount of water available in each shelter as a result of being trapped in the plumbing system, water heaters, boilers, fire standpipes and distribution pipes. All such water is potable, but may require separation from sedimentation.

- Additional water storage in shelters can be achieved by shelterees taking all water possible with them, storing water in durable plastic bags and containers, using buckets, barrels, etc. (Fill prior to shelter occupancy when possible.)

- Sanitation supplies for disposing of food residue and human waste will require particular attention and should be monitored closely by medical and health services. Necessary supplies should be stockpiled to maintain adequate standards of sanitation, especially over a possible two week period when normal water supplies may not be available. Ideally, restroom facilities could be used, but their operation cannot be guaranteed. The following items are considered essential: drums or garbage cans with plastic liners; disinfectants; packaged cleaning towels and toilet paper; and chemical toilets where possible (with chemicals).

## 20.4 OTHER SUPPLIES

The following items may also be in short supply, and should be augmented to the extent practical and possible:

Bedding or sleeping bags and portable cots;
Eating utensils;
Change of clothing;
Recreational equipment (games);
Flashlights and extra batteries; and
Portable radios with extra batteries.

Items of this nature should be provided in advance, primarily through educational programs in the community by the Emergency Information Program. There must be close coordination between resource and supply and reception and care services to achieve maximum results with a minimum of lost effort. For example, Exhibits 20.1 through 20.4 are equally valuable guides for both organizational elements, but for different purposes (one for requisitioning congregate care supplies and the other for fallout shelter meals).

EXHIBIT 20.1

NATIONAL EMERGENCY MAXIMUM FOOD ALLOWANCE

(For Congregate Care Operations)

| Food Groups and Food Items | Per Person Per Week |
|---|---|
| Meat and Meat Alternates (fresh, frozen and cured meat, poultry, shellfish; cheese; and nuts) | 3 lbs. boneless<br>4 lbs. with bone |
| Eggs | 6 eggs |
| Milk (fresh)<br>(If fresh fluid milk is not available, see Exhibit 20.2 for acceptable substitutes.) | 7 pints |
| Cereals and Cereal Products (flour including mixes, fresh bakery products, corn meal, rice, hominy, macaroni, and breakfast cereals) | 4 lbs. |
| Fruits and Vegetables (fresh and frozen) | 4 lbs. |
| Food Fats and Oils (butter, margarine, lard, shortening, salad and cooking oils) | 1/2 lb. |
| Potatoes (white and sweet) | 2 lbs. |
| Sugars, Syrups, Honey and Other Sweets | 1/2 lb. |

EXHIBIT 20.2

NATIONAL EMERGENCY MAXIMUM FOOD ALLOWANCE

SUBSTITUTES FOR FOODS IN EXHIBIT 20.1

| Unit | Equivalent Unit | Substitute Foods |
|---|---|---|
| Meat and Meat Alternates<br>1 lb. boneless | 1/2 lb.<br>1/4 lb.<br>12<br>2-3/4 lb.<br>2-1/2 pts. | Cereal and cereal products<br>Food fats and oils<br>Eggs<br>Potatoes<br>Milk |
| Eggs<br>6 eggs | 1/2 lb.<br>1/4 lb.<br>1 pt.<br>10 oz. | Meat and meat alternates<br>Cereal and cereal products<br>Milk<br>Frozen whole eggs |
| Milk (fresh fluid)<br>1 pint | 2/5 lb.<br>1/5 lb. | Meat and meat alternates<br>Cereals and cereal products |
| Cereal and Cereal Products<br>1 lb. | 2 lbs.<br>5 lbs. | Meat and meat alternates<br>Potatoes (white and sweet) |
| Food Fats and Oils<br>1 lb. | 4 lbs.<br>2 lbs. | Meat and meat alternates<br>Cereals and cereal products |
| Potatoes<br>1 lb. | 1/5 lb.<br>2 lbs. | Cereal and cereal products<br>Fruits and vegetables |

EXHIBIT 20.2 (CONTINUED)

NATIONAL EMERGENCY MAXIMUM FOOD ALLOWANCE SUBSTITUTION

RATES FOR CANNED, DRY AND CONCENTRATED FOODS

| Unit | Equivalent Unit | Substitute Foods |
|---|---|---|
| Meat and Meat Alternates<br>1 lb. boneless | 1 lb.<br>2 lbs.<br>2 lbs.<br><br><br>1 lb. | Canned meats, poultry and fish<br>Canned pork and beans<br>Canned meat mixtures such as hash, chili, stew, spaghetti and meatballs<br>Dry beans and peas |
| Eggs<br>6 eggs | 3 oz. | Dried whole eggs |
| Milk (fluid)<br>1 pint | 8 ozs.<br>3 ozs.<br>2 ozs.<br>3 ozs.<br>3 ozs. | Canned evaporated milk<br>Canned condensed milk<br>Dried milk, whole<br>Dried milk, non-fat solids<br>Malted milk, dry powder |
| Fruits and Vegetables<br>1 pound | 2/3 lb. | Canned fruit and vegetables |
| Food Fats and Oils<br>1 pound | 1 pound | Canned food fats and oils |
| Potatoes<br>1 pound | 3 ozs. | Dried potato flakes |

EXHIBIT 20.3

AUSTERE FALLOUT SHELTER MENUS

(Approximately 1050-1100 Calories)

| Menu 1 (First Meal) | Individual Serving | Calories/ Individual Serving | Pounds/ 100 Servings |
|---|---|---|---|
| Canned Juices (fruit or vegetable) | 4 oz. | 25 | 25.00 |
| Cereals (ready-to-eat) | 1 oz. | 50 | 6.25 |
| Whole Dry Milk | 1-1/8 oz. | 130 | 7.00 |
| Graham Crackers | 1/2 oz. | 200 | 3.13 |
| Jams and Jellies | 1 Tbsp. | 50 | 6.00 |
| Instant Tea | 1 Tbsp. | 0 | 3.00 |
| Sugar (granulated) | 2 tsp. | 35 | 2.00 |
| **Menu 2 (Second Meal)** | | | |
| Canned Beef Stew with Vegetables | 6 oz. | 200 | 37.50 |
| Canned Fruit | 4 oz. | 100 | 25.00 |
| Canned Vegetables | 4 oz. | 25 | 25.00 |
| Peanut Butter | 1 Tbsp. | 100 | 7.00 |
| Rye Crisp (unseasoned) | 1/2 oz. | 25 | 3.13 |
| Whole Dry Milk | 1-1/8 oz. | 130 | 7.00 |
| Instant Coffee | 1 tsp. | 0 | 1.00 |

EXHIBIT 20.4

AUSTERE FALLOUT SHELTER MENUS

(Substitutes for Foods in Exhibit 20.3)

| Menu Item | Substitute | Individual Serving | Calories/ Individual Serving | Pounds/ 100 Servings |
|---|---|---|---|---|
| Jellies and Jams | Peanut butter | 1 Tbsp. | 100 | 7.00 |
| | Honey | 1 Tbsp. | 100 | 6.00 |
| Instant Tea | Instant coffee | 1 tsp. | 0 | 1.00 |
| | Flavored beverage powders | 1 Tbsp. | 0 | 3.00 |
| Canned Beef Stew with Vegetables | Canned Meat | 3 oz. | 150 | 18.75 |
| | Canned Fish | 4 oz. | 100 | 25.00 |
| | American Cheese | 2 oz. | 200 | 12.50 |
| | Canned Spaghetti & Meatballs in Sauce | 5 oz. | 125 | 31.25 |
| Rye Crisp (unseasoned) | Crackers | 4 oz. | 40 | 3.00 |

# 21. MEDICAL AND HEALTH SUPPLIES

21.1 MANAGEMENT Page 21-1
21.2 PROCEDURES Page 21-2

## 21.1 MANAGEMENT

Normal procedures for procurement, receipt, storage and accounting for drugs and pharmaceuticals should be continued in host areas during emergency evacuation. Health care delivery will lie mainly in private hands; any transfer of responsibility for procuring and controlling medical and health supplies to government officials would probably be ineffective. The professionals normally responsible should continue their operations. Government officials should limit their activities to coordinating the acquisition of supplies, providing security for sensitive items, and possibly establishing priorities for use and consumption based on overall knowledge of the situation. Most host area communities can be expected to have up to seven days of necessary supplies on hand.

Additional treatment centers to serve the relocated population can pose added requirements for hospitals and clinics, and medical supplies, approximately proportionate to the size of the relocating population. Some upward adjustments may be necessary because of the increased incidence of diseases associated with crowded living conditions, lowered standards of cleanliness and sanitation, and delays and stoppages of garbage and trash collections.

## 21.2 PROCEDURES

When the emergency evacuation begins the resource and supply coordinator may take precautionary actions if government coordination of the acquisition and distribution of medical and health supplies is required. He should:

- Determine whether procedures in effect are adequate to ensure the required flow of medical and health supplies to provide for the combined resident and relocatee population. Consult with the medical community, retailers and wholesalers where appropriate. Modify procedures if required.
- Inventory existing medical and health supplies and pharmaceuticals in the host area to provide a basis for initial orders to take care of the increased population.
- Prepare orders for required additional supplies.
- Establish and maintain a list of drug and pharmaceutical wholesalers in adjacent and risk areas that could be called on for supplies.
- Locate additional secure storage space, which may be required for the increased stocks.
- Coordinate sanitation supply requirements with medical, public works, sanitation companies, and reception and care personnel.
- If fallout shelters are involved, all shelters and facilities will have increased requirements for receptables (cans, bags, etc.) to store refuse and waste. Lack of water for disposing of waste may greatly aggravate sanitation problems. Disinfectants, insecticides, and rodenticides, etc. should be procured and distributed to sufficient quantities to cover a two week in shelter stay.
- Ensure that operating schedules for pharmacies are distributed to the public. Should the state impose rationing, prepare to use the Food Shopper's Ration Card (Blocks 101-120), as explained in Section 17.

During the various operational phases of crisis relocation, risk area operating staffs must be capable of continuing their respective operations and possibly augmenting, based on mutual agreement, host

communities by rescheduling personnel, establishing longer work shifts and possibly scaling down or eliminating certain functions.

# 22. PETROLEUM PRODUCTS

22.1 REQUIREMENTS page 22-1
22.2 MANAGEMENT Page 22-1

## 22.1 REQUIREMENTS

At the onset of an emergency evacuation, requirements for petroleum products are expected to be greater than those under normal conditions. As evacuation movements are accomplished requirements should decrease because of the general decrease in most activities. Should state or local officials impose controls on traffic and vehicle use, consumption will decrease further. If necessary, upgrading existing buildings to achieve increased shelter space will require considerable amounts of fuel for heavy construction equipment. This demand will continue until such work is completed or curtailed.

## 22.2 MANAGEMENT

After the initiation of the emergency evacuation, the resource and supply coordinator may assume responsibility for petroleum distribution and consumption. The coordinator and his staff should work closely with the emergency organization to provide products for essential operations, and to determine where non-essential or marginal consumption can be curtailed. The objectives of resource and supply operations with respect to petroleum products may be to:

- Curtail the use of private vehicles except when needed for official use.
- Ensure a supply of petroleum products to the community to enable host area operations to be conducted smoothly and effectively.
- Determine any increased diesel fuel requirements for trucks and heavy equipment to support upgrading of shelters. Allocate as needed.
- Establish fuel supply facilities at critical locations for relocatees and for trucks and heavy equipment. Provide advice to users on procedures for acquiring products.
- Determine and provide propane or butane supplies in support of recreational vehicles that relocatees may bring into the area in lieu of congregate care housing.
- Work with the petroleum industry to establish procedures that will cause a minimum of disruption to the industry and yet allow for effective emergency operations.
- Comply with state or federal directives and controls, which may cover fuel inventories, allocations, and consumption.
- Close bulk fuel points and service stations if directed by federal, state or local officials.

There is some basis for the contingency that cash or charge payments for petroleum products delivered to bulk storage, service stations or dispensed to vehicles or equipment might be suspended in an emergency evacuation. Costs and subsequent payment would be based on a receipt system. Some state plans require completion of a receipt form made up in triplicate for each fuel transaction. The original copy would be retained by the seller, and another copy would be kept by the buyer (user). The third copy would be submitted to a Resource Control Group for subsequent determination of costs and payments. If this type of system is imposed or meets the needs of host area officials, a suggested receipt form is presented in Exhibit 22.1.

During the various operational phases of crisis relocation, risk area operating staffs must be capable of continuing their respective operations and possibly augmenting, based on mutual agreement, host communities by rescheduling personnel, establishing longer work shifts and possibly scaling down or eliminating certain functions.

EXHIBIT 22.1

PETROLEUM PRODUCTS RECEIPT

1. Jurisdiction _____

2. Date of Transaction _____

3. Name of Seller _____
(Print)

_____
(Signature)

Address _____

5. Type Product and Quantity

[ ] Diesel Quantity _____

[ ] Gasoline Quantity _____

[ ] Propane Quantity _____

[ ] Butane Quantity _____

[ ] Lubricants Quantity _____

6. Use of Product

[ ] To Bulk Storage

[ ] To Service Station

[ ] To Official Vehicle or Equipment

7. Cost _____
(to be subsequently completed by the local Resource Control Group)

8. Remarks _____

_____

_____

# 23. UTILITY SERVICES

23.1 MISSION Page 23-1
23.2 PROCEDURES Page 23-2

## 23.1 MISSION

Emergency evacuation should present no unmanageable problems for the host areas insofar as the various utilities are concerned. They are essentially fixed, existing services provided by private or publicly owned, areawide utility companies, including electric power, telephone, and natural gas. These companies are well prepared to operate under emergency conditions. The local availability of service will be dictated by existing conditions. Water, sewage, and solid waste are often government controlled and operated. The major concern of local officials will be establishing priorities for consumption. Conservation and efficient use will be a prime responsibility for officials monitoring and directing the activities of utility services.

Most utilities are managed and supplied from outside the immediate host area, or even out of the state, through interconnecting networks. State and federal controls generally apply to the services supplied. Close working relationships normally exist between local government officials and the staff of each utility company for local operations.

## 23.2 PROCEDURES

After the initiation of emergency evacuation, the resource and supply coordinator may assume responsibility for utility services. The following actions are suggested to ensure proper coordination of services and effective priorities for consumption:

- Establish (if necessary) an effective emergency working relationship with each utility company supplying the host area. Review probable requirements for utilities to serve the increased population.
- Determine those essential facilities and services that must have adequate electric power or natural gas. These might include key government facilities, public safety operations, hospitals, and water and sanitation facilities.
- Ascertain if alternate power sources are available, including emergency generators. Support may be available from the state and the risk areas. The generators should be tested and have adequate fuel supplies on hand.
- Survey facilities designated as reception centers and lodging headquarters to determine if adequate telephone capability exists for communications. Develop plans for installation of necessary equipment.
- Determine potable water capability to handle relocated population requirements. Develop plans for conservation if necessary.
- Coordinate with reception and care for water in fallout shelter. Develop plans for obtaining and filling water containers, as appropriate.
- Determine if the sewage system is capable of accommodating the relocated population. If overloading is a possibility, work with the municipal public works director to develop a plan or system to overcome this deficiency.
- Develop plans and schedules for the pick-up and disposal of solid waste where normal schedules are inadequate to meet increased needs. Augment sanitation vehicles with other types of trucks as necessary. Consider augmentation from the risk areas.
- If conservation methods are required, work with gas and electric company personnel to monitor consumption and availability. If

rationing or curtailment of supplies for business or home consumption is warranted, make appropriate plans to implement necessary actions.

- Work with telephone company and key users to monitor telephone usage to detect problems. Ensure line load control is imposed where available and necessary.

- Work with the medical and health service to ensure the maximum effectiveness of disease prevention measures by providing necessary supplies and services.

During the various operational phases of crisis relocation, risk area operating staffs must be capable of continuing their respective operations and possibly augmenting, based on mutual agreement, host communities by rescheduling personnel, establishing longer work shifts and possibly scaling down or eliminating certain functions.

# 24. TRANSPORTATION

24.1 MISSION Page 24-1
24.2 PROCEDURES Page 24-2

## 24.1 MISSION

Long haul transportation of supplies and equipment to host areas will be coordinated by the state. Transportation of commuting workers to and from the risk areas, if commuting is required, will be the primary responsibility of the state and risk areas. The main concern of the host community should be distributing essential supplies and transporting both the resident and relocatee population to food outlets, pharmacies, medical and health facilities, and feeding facilities.

If disaster conditions are severe, state or local officials may decide to restrict vehicle use in host areas. Then only those authorized vehicles (Section 11) would be permitted to operate in the host area. Control of vehicles required for official use would continue to be the responsibility of essential agencies and businesses.

A system of mass transportation might be necessary to transport people within the host area. The closing of schools and the curtailment of other activities involving the use of buses and trucks would free transportation capacity, which could be diverted to mass transportation activities.

Augmentation of local transportation may be required. Vehicles might have been received from risk areas during the evacuation movement. These would be available to the host community. If time permits, it may be desirable to arrange with risk area officials beforehand to ensure that specific types and numbers of vehicles are received. Normally, the drivers and operators of the vehicles would bring them to the host area and also be available for host area transportation operations. It should be noted at this point that risk area operating staffs must be capable of continuing their respective operations for as long as may be necessary.

## 24.2 PROCEDURES

After the emergency evacuation is initiated, the resource and supply coordinator may take the following actions:

- Inventory local transportation resources by category to determine capabilities for establishing a mass transportation system.
- Work with reception and care to establish transportation requirements to food establishments from homes, congregate care lodging facilities, hospitals, etc.
- Establish schedules, brief officials, and publicize transportation plans so the general population can become familiar with the system. Work with public information officials to accomplish publicity needed.
- Develop maintenance schedules and advise affected parties.
- Coordinate with the petroleum products section to establish requirements for fuel supplies and refueling points. Advise all operating elements as appropriate.
- Coordinate with state and risk areas for vehicles and operators required to augment local resources.

# 25. CONSTRUCTION REQUIREMENTS FOR UPGRADING FALLOUT SHELTERS

25.1 REQUIREMENTS Page 25-1
25.2 PROCEDURES Page 25-2

## 25.1 REQUIREMENTS

Normal construction projects will probably be deferred or curtailed in host areas during emergency evacuation. Should a nuclear emergency be declared, fallout shelter construction or upgrading may be required. Upgrading can achieve both improved and additional shelter space. Achieving space through developing expedient shelter was discussed in Section 18.

Many communities have a CSP, which lists those buildings surveyed for shelter space. CSP's contain valuable information, such as shelter locations, the number of people who can be sheltered, the degree of protection provided, water and food availability, travel or walking time to shelter, and other data. Total shelter requirements of a host area are the combined resident and relocatee population. Comparing them to CSP data in many cases will highlight shelter deficits, which can only be offset by upgrading or constructing additional shelters. Shelter construction may not be considered a realistic alternative; therefore, upgrading may be the preferred method for achieving necessary protection. Risk areas are considered to have adequate fallout shelter space to meet requirements. Reference Section 18 -- Fallout Shelter Organization and Operations.

Engineering assistance will be essential for any major upgrading effort. City and county engineers and local engineering firm personnel should be used. The federal government has done much research on this subject, taking into account various types of buildings and construction. Schematic drawings of upgraded and expedient shelter construction have been developed. This type of information is available through the state and may prove valuable. It should be requested as appropriate.

Upgrading involves considerable use of heavy trucks, bulldozers, backhoes, and other equipment and materials. Engineering firms and government-owned equipment and operators in the community would be major sources of equipment, operators and technical support. Augmentation may also be required from the risk areas and adjacent communities not affected by relocation.

## 25.2 PROCEDURES

The resource and supply coordinator should assume responsibility for shelter upgrading. At the inception of a nuclear emergency evacuation, he may take the following actions:

- Determine whether a CSP has been developed and, if so, its current status.
- If there is no CSP or if it is out-of-date, work with the reception and care organization (Section 18) to determine which buildings are to be used as fallout shelters.
- When a list of buildings has been compiled and shelter deficits are known, determine which facilities can best be upgraded to meet overall requirements. Consideration should also be given to upgrading those government facilities used for emergency management and operations that may not offer adequate protection.

- Compile an inventory of locally available earthmoving equipment and operators. Consider augmentation from risk areas and nearby communities not affected by relocation. Advise owners of equipment regarding probable use.

- Determine requirements for and sources of earth, lumber, plywood, doors (to place dirt on), and other materials. Inform work crews of availability and sources.

- Advise owners and managers of buildings and facilities to be upgraded on what is involved, and seek their understanding and cooperation. When owners object, secure legal assistance.

- Secure specific authorization from the chief executive to begin upgrading.

- Prepare individual designs showing placement of soil. Distribute these to work crews.

- Consider using relocatee labor and residents to augment work crews as needed to support the upgrading effort. It may be necessary to use radio and other communications media to solicit volunteer workers and hand tools.

- Develop procedures for maintaining cost records pertaining to shelter upgrading and for restoration following the emergency. (This will be a major concern to property owners.) Settlement costs may be an issue following the emergency, so care should be taken to ensure completion and safekeeping of records. The form shown in Exhibit 25.1 may be used for recordkeeping purposes.

- Following the emergency, and when the chief executive directs, restore all upgraded facilities to their pre-emergency state.

EXHIBIT 25.1

SHELTER UPGRADING/RESTORATION COSTS

_____
County/City/Town

1. Facility upgraded _____

   Area of equipment use (borrow pit) _____

   Facility restored _____

2. Equipment used (how many and source)

   Front-end loader _____

   Backhoe _____

   Grader _____

   Dozer _____

   Dump Trucks _____ _____

3. Total personnel used (how many)

   Equipment operators _____

   Volunteers _____

4. Total time (hours)

   To upgrade facility _____

   Area of use (borrow pit) _____

   Facility restoration _____

5. Signed by _____
   Name

   _____
   Title

   _____
   Date

# 26. RADIOLOGICAL DECONTAMINATION

26.1 REQUIREMENTS Page 26-1
26.2 PROCEDURES Page 26-2

## 26.1 REQUIREMENTS

The subject of radiological defense against the hazards of nuclear radiation is discussed in Sections 6 and 18. Those sections of this guide are devoted to the hazards of radiation, how to be protected against fallout, and RADEF program requirements. Once a person or facility has been exposed to radioactive particles it is necessary that decontamination procedures be taken to minimize the effects of radiation on the individual and to render facilities and equipment habitable and usable.

Each community should have a RADEF program as a basic element of emergency preparedness, and where one doesn't exist or is outdated, action should be taken with the state and federal government to establish one. Even with a minimal RADEF program, a community can decontaminate people and facilities by following a few basic rules. Decontamination procedures are simple, but timely action is required when people are affected. A RADEF officer, technician or other person knowledgeable of radiation hazards would be of value in providing guidance and assistance, so every effort should be made to ensure that qualified assistance is available.

## 26.2 PROCEDURES

After the emergency evacuation involving nuclear materials is initiated, the resource and supply coordinator should take action to:

- Determine if the community has an RADEF program and to what extent it can support decontamination. He should seek competent assistance where a program is non-existent or ineffective.

- Provide decontamination facilities for people exposed to radioactive particles. Particles can be brushed off or shook from clothing if dry. Washing clothes can also dispose of particles. Exposed parts of the body should be washed with soap and water.

- Determine which essential facilities (such as communication centers, emergency government and public utility headquarters, and vital equipment) could require early decontamination. Be prepared to wash down (hose down) and clean up rapidly once fallout is down and workers can safely accomplish the work.

- Plan to reduce radiation hazards (radioactivity cannot be destroyed) by:

  1) Removing radioactive particles from a contaminated surface and away from the immediate area. (Wash down where practical.)

  2) Covering the contaminated surface with shielding material, such as earth.

  3) Isolating contaminated objects and waiting for radiation levels to decrease through the radioactive decay process.

- Develop a cadre of decontamination workers -- firemen, sanitation and construction workers, etc. -- to perform the basic decontamination work. They should be trained to (1) measure and minimize their personal radiation exposure while performing decontamination operations, (2) rapidly remove all possible radioactive particles, and (3) dispose of or relocate contaminated materials.

- Acquire dosimeters to measure individual radiation exposure. (If unavailable in the host area, requests should be submitted to the state.) Chargers to retain reading capability will also be required.

- Work with the the RADEF officer or other available technically qualified personnel to measure radiation exposure to individuals, to record exposure rates and accummulated exposure, and decontaminate individuals.

- To accomplish essential activities such as removing the dead from shelters or securing critically needed life-sustaining supplies, some people may be required to leave shelters for brief work periods. Decontamination and accurate records regarding exposure can be used to reduce illness and death.

SYSTAN, Inc., Los Altos, California 94022 UNCLASSIFIED

A GUIDE FOR EMERGENCY EVACUATION MANAGEMENT AND OPERATIONS by Robert A. Harker and Allen E. Wilmore; Final Report, February 1981, 166 pages, Contract No. DCPA01-79-C-0253, Work Unit 2312-H.

This guide is to provide a set of procedures and options for local officials who may, because of crisis or disaster conditions, be required without prior planning, or assistance to provide care and protection for people who leave their homes to relocate to a safer location. A research report "Emergency Evacuation Management Requirements and Concepts" has also been prepared under this contract.

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