State and Local Guide (SLG) 101

Guide for All-Hazard Emergency Operations Planning

September 1996

FOREWORD

One goal of the Federal Emergency Management Agency (FEMA) is to develop, in partnership with State and local governments, a national emergency management system that is comprehensive, risk-based, and all-hazard in approach.

Crucial to this system are emergency operations plans (EOP), which describe who will do what, as well as when, with what resources, and by what authority--before, during, and immediately after an emergency.

This State and Local Guide (SLG) provides emergency managers and other emergency services personnel with information on FEMA's concept for developing risk-based, all-hazard emergency operations plans.

This Guide clarifies the preparedness, response, and short-term recovery planning elements that warrant inclusion in State and local EOPs. It offers FEMA's best judgment and recommendations on how to deal with the entire planning process--from forming a planning team to writing the plan. It also encourages emergency managers to address all of the hazards that threaten their jurisdiction in a single EOP instead of relying on stand-alone plans.

This Guide should help State and local emergency management organizations produce EOPs that:

- serve as the basis for effective response to any hazard that threatens the jurisdiction;
- facilitate integration of mitigation into response and recovery activities; and
- facilitate coordination with the Federal Government during catastrophic disaster situations that necessitate implementation of the Federal Response Plan (FRP).

Emergency planners in the business and industry and animal care communities may find portions of this Guide useful in the development of their emergency response plans. Industry planners may also consult FEMA-141, *Emergency Management Guide for Business and Industry*.

FEMA welcomes recommendations on how this Guide can be improved to better serve the needs of the emergency management community. Comments should be addressed to FEMA, Attn: Preparedness, Training, and Exercises Directorate, State and Local Preparedness Division, Washington, DC 20472.

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About This Document

Purpose

This Guide is meant to aid State and local emergency managers (also called "emergency management coordinators") in their efforts to develop and maintain a viable all-hazard emergency operations plan. **The Guide is a "toolbox" of ideas and advice, not a sample EOP.** Each community's EOP must reflect what *that community* will do to protect itself from *its* hazards with the resources *it* has or can obtain.

Applicability and Scope

This Guide is intended primarily for use by personnel responsible for EOP development and maintenance in State and local emergency management agencies. It is strictly a guide. **It establishes no requirements, and its recommendations may be used, adapted, or disregarded.**

Supersession

This SLG is new. It replaces Civil Preparedness Guide (CPG) 1-8, *Guide for the Development of State and Local Emergency Operations Plans* (dated September 10, 1990); CPG 1-8A, *Guide for the Review of State and Local Emergency Operations Plans*, (dated October 1992); and CPG 1-10, *Guide for the Development of a State and Local Continuity of Government Capability* (dated July 27, 1987), which have been rescinded.

Authorities

This SLG is issued under authority of the *Robert T. Stafford Disaster Relief and Emergency Assistance Act*, as amended. In this law, Congress recognizes emergency management as a joint responsibility of Federal, State, and local government. For the Federal Government, Congress defines a role that includes providing "necessary direction, coordination, and guidance" (Sec. 601) for the Nation's emergency management system, to include "technical assistance to the States in developing comprehensive plans and programs for preparation against disasters" (para. 201(b)).

Local governments should use this Guide to supplement guidance from their States.

Overview of Contents

Chapter 1 explains what an EOP is at the State and local levels, why the EOP is a necessary part of a comprehensive approach to emergency management, and how the EOP relates to other aspects of the comprehensive, risk-based, all-hazard approach.

Chapter 2 describes the approach FEMA recommends for a step-by-step process of risk-based, all-hazard emergency operations planning. Chapter 3 suggests how to format the results of the planning process in a written EOP. Chapters 4 and 5 list and discuss elements that, if applicable for a jurisdiction, should be addressed in its all-hazard EOP.

Chapter 6 notes unique aspects of certain hazards, including associated regulatory requirements. It suggests how to address these unique aspects in the all-hazard EOP rather than in stand-alone plans. The chapter is not meant to replace hazard-specific planning guidance issued by the Radiological Emergency Preparedness (REP) Program of FEMA and the Nuclear Regulatory Commission (NRC), the Chemical Stockpile Emergency Preparedness Program (CSEPP), or the National Response Team (NRT).

Chapter 7 contains information on integrating State EOPs with the Federal Response Plan, so that all levels of government can provide a coordinated response to communities in need.

Please note that, unlike previous FEMA planning guidance, this Guide addresses animal care and control and gives extensive treatment to resource management (including donations management).

Revision Process

To be relevant, FEMA's planning guidance had to reflect three basic changes: (1) Congress eliminated emphasis on the nuclear attack hazard and restated Federal Civil Defense Act authorities in the Stafford Act; (2) FEMA and the Federal Government have acquired a broader role in disaster response; and (3) emergency management planning in the States and many localities has matured beyond the sample plans FEMA provided in earlier planning guidance. Also, FEMA has taken a new approach to dealing with the States: Performance Partnership Agreements (PPA). With Performance Partnership Agreements, FEMA trades increased flexibility "up front" for increased attention to results. This Guide fits the new way of doing business.

In July 1995, FEMA convened a group of local, State, and Regional planners to offer suggestions on making all-hazard EOP guidance more useful given "conditions in the field." This Guide reflects many of their ideas.

FEMA will revise this SLG as needed. Change pages will be issued through the

FEMA publication distribution system to organizations designated to receive this Guide. Other holders of this document should contact their State or local emergency management organization or the FEMA Printing and Publications Branch to get a copy of the change(s) or more copies of the Guide.

Table of Contents

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List of Figures and Tables

Page

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Chapter 1
Preliminary Considerations

What an EOP Is

General

A jurisdiction's emergency operations plan is a document that:

- Assigns responsibility to organizations and individuals for carrying out specific actions at projected times and places in an emergency that exceeds the capability or routine responsibility of any one agency, e.g., the fire department.
- Sets forth lines of authority and organizational relationships, and shows how all actions will be coordinated.
- Describes how people and property will be protected in emergencies and disasters.
- Identifies personnel, equipment, facilities, supplies, and other resources available--within the jurisdiction or by agreement with other jurisdictions--for use during response and recovery operations.
- Identifies steps to address mitigation concerns during response and recovery activities.

As a public document, an EOP also cites its legal basis, states its objectives, and acknowledges assumptions.

Local EOPs

In our country's system of emergency management, local government must act first to attend to the public's emergency needs. Depending on the nature and size of the emergency, State and Federal assistance may be provided to the local jurisdiction. The local EOP focuses on the measures that are essential for protecting the public. These include warning, emergency public information, evacuation, and shelter.

State EOPs

States play three roles: They assist local jurisdictions whose capabilities are overwhelmed by an emergency; they themselves respond first to certain

emergencies; and they work with the Federal Government when Federal assistance is necessary. The State EOP is the framework within which local EOPs are created and through which the Federal Government becomes involved. As such, the State EOP ensures that all levels of government are able to mobilize as a unified emergency organization to safeguard the well-being of State citizens. The State EOP is of critical importance.

Why Your Jurisdiction Should Have an EOP

Government's Responsibility for Emergency Management

When disasters threaten or strike a jurisdiction, people expect elected leaders to take immediate action to deal with the problem. The government is expected to marshal its resources, channel the efforts of voluntary agencies and private enterprise in the community, and solicit assistance from outside of the jurisdiction if necessary.

In all States and most localities, that popular expectation is given force by statute or ordinance. Congress also recognizes State and local emergency management responsibility in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended:

- "It is the intent of Congress, by this Act, to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out *their* responsibilities to alleviate the suffering and damage which result from [...] disasters (Sec. 101(b), emphasis added).

- "The purpose of this title is [...] to vest responsibility for emergency preparedness jointly in the Federal Government and the several States and their political subdivisions" (Sec. 601).

The elected leadership in each jurisdiction is legally responsible for ensuring that necessary and appropriate actions are taken to protect people and property from the consequences of emergencies and disasters.

Comprehensive Emergency Management

Governments can discharge their emergency management responsibilities by taking four interrelated actions: mitigation, preparedness, response, and recovery. A systematic approach is to treat each action as one phase of a comprehensive process, with each phase building on the accomplishments of the preceding one. The overall goal is to minimize the impact caused by an

emergency in the jurisdiction.

Mitigation

Mitigation actions involve lasting, often permanent, reduction of exposure to, probability of, or potential loss from hazard events. They tend to focus on where and how to build. Examples include: zoning and building code requirements for rebuilding in high-hazard areas; floodplain buyouts; and analyses of floodplain and other hazard-related data to determine where it is safe to build in normal times, to open shelters in emergencies, or to locate temporary housing in the aftermath of a disaster. Mitigation also can involve educating businesses and the public on simple measures they can take to reduce loss and injury, like fastening bookshelves, water heaters, and file cabinets to walls to keep them from falling during earthquakes.

Cost-effective mitigation measures are the key to reducing disaster losses in the long term. In hazard-prone areas, mitigation can break the cycle of having to rebuild and rebuild again with every recurrence of floods, hurricanes, or earthquakes. Where there is a willingness to mitigate, opportunities can be found. Ongoing efforts might include: educating the private sector about what it can do to mitigate at home and at work; reaching out to planning, zoning, and development agencies to ensure that hazard conditions are considered in comprehensive plans, construction permits, building codes, design approvals, etc.; and creating inventories of existing structures and their vulnerabilities, to aid mitigation planning. There is also a need for planning to take advantage of mitigation opportunities in the aftermath of an emergency or disaster, when hazard awareness is high, funds may become available (with associated requirements for mitigation), and disruption of the *status quo* makes it possible to rethink design and location of some facilities and infrastructure. Attention to mitigation opportunities can make safer communities for us all.

Preparedness

While mitigation can make communities safer, it does not eliminate risk and vulnerability for all hazards. Therefore, jurisdictions must be ready to face emergency threats that have not been mitigated away. Since emergencies often evolve rapidly and become too complex for effective improvisation, a government can successfully discharge its emergency management responsibilities only by taking certain actions beforehand. This is preparedness.

Preparedness involves establishing authorities and responsibilities for emergency actions and garnering the resources to support them: a jurisdiction must assign

or recruit staff for emergency management duties and designate or procure facilities, equipment, and other resources for carrying out assigned duties. This investment in emergency management requires upkeep: the staff must receive training and the facilities and equipment must be maintained in working order. To ensure that the jurisdiction's investment in emergency management personnel and resources can be relied upon when needed, there must be a program of tests, drills, and exercises. Consideration also must be given to reducing or eliminating the vulnerability of the jurisdiction's emergency response organizations and resources to the hazards that threaten the jurisdiction.

Accordingly, preparedness measures should not be improvised or handled on an *ad hoc* basis. A key element of preparedness is the development of plans that link the many aspects of a jurisdiction's commitment to emergency management.

Response

The onset of an emergency creates a need for time-sensitive actions to save lives and property, as well as for action to begin stabilizing the situation so that the jurisdiction can regroup. Such response actions include notifying emergency management personnel of the crisis, warning and evacuating or sheltering the population if possible, keeping the population informed, rescuing individuals and providing medical treatment, maintaining the rule of law, assessing damage, addressing mitigation issues that arise from response activities, and even requesting help from outside the jurisdiction.

Recovery

Recovery is the effort to restore infrastructure and the social and economic life of a community to normal, but it should incorporate mitigation as a goal. For the short term, recovery may mean bringing necessary lifeline systems (e.g., power, communication, water and sewage, and transportation) up to an acceptable standard while providing for basic human needs (e.g., food, clothing, and shelter) and ensuring that the societal needs of individuals and the community are met (e.g., maintain the rule of law, provide crisis counseling, demonstrate that people do care and that help is becoming available). Once some stability is achieved, the jurisdiction can begin recovery efforts for the long term, restoring economic activity and rebuilding community facilities and family housing with attention to long-term mitigation needs.

Criticality of All-Hazard

The centerpiece of comprehensive emergency management is the EOP. First, the EOP defines the scope of *preparedness* activity necessary to make the

EOPs

EOP more than a mere paper plan. Training and exercises, in particular, depend on an EOP. Training helps emergency response personnel to become familiar with their responsibilities and to acquire the skills necessary to perform assigned tasks. Exercising provides a means to validate plans, checklists, and response procedures and to evaluate the skills of response personnel.

Second, the EOP facilitates *response* and *short-term recovery* (which set the stage for successful *long-term recovery*). Response actions are time-sensitive, with little allowance for delay or "mid-course corrections," and some post-disaster mitigation issues such as rebuilding and placement of temporary housing facilities also must be addressed quickly. Advance planning makes this easier.

Finally, an EOP that is flexible enough for use in all emergencies--including unforeseen events--provides a community with an emergency management "bottom line." From there, a community can proceed confidently with long-term *mitigation* efforts directed at specific hazards. Or, it can devote more resources to risk-based *preparedness* measures (e.g., specialized training, equipment, and planning). Whatever the initiative, an all-hazard EOP helps the community start from a position of relative security.

What an EOP Is Not

Those who draft an EOP must understand what it is not. While this chapter has called a jurisdiction's EOP--its response plan--the "centerpiece" of its comprehensive emergency management effort, that does not mean that the EOP details all aspects of that effort.

Other Types of Plans

Emergency management involves several kinds of plans, just as it involves several kinds of actions.

Administrative Plans

Administrative plans describe policies and procedures basic to the support of a governmental endeavor: typically they deal less with external work products than with internal processes. Examples include plans for financial management, personnel management, records review, and labor relations activities. Such plans are not the direct concern of an EOP. However, if it is assumed that provisions of an administrative plan apply in emergency situations, then the administrative plan may be referenced in the EOP. Likewise, if exceptions to normal administrative plans are permitted in an emergency, that fact should be

noted in the relevant part of the EOP.

Mitigation Plans

A jurisdiction may outline its strategy for mitigating the hazards it faces; in fact, a mitigation plan is required of States that seek funds for post-event mitigation after Presidential declarations under the Stafford Act. Existing plans for mitigating hazards are relevant to an EOP, particularly in short-term recovery decision-making, which can affect prospects for effective implementation of a mitigation strategy aimed at reducing the long-term risk to human life and property in the jurisdiction.

Preparedness Plans

Preparedness planning covers three objectives: maintaining existing emergency management capability in readiness; preventing emergency management capabilities from themselves falling victim to emergencies; and, if possible, augmenting the jurisdiction's emergency management capability.

Such plans would include: the process and schedule for identifying and meeting training needs (based on expectations created by the EOP); the process and schedule for developing, conducting, and evaluating exercises, and correcting identified deficiencies; and plans to procure or build facilities and equipment that can withstand the effects of hazards facing the jurisdiction. Results of these efforts should be incorporated in the EOP as assumptions: that certain equipment and facilities are available, that people are trained and exercised, etc.

Operational checks of equipment and communications systems, however, be a part of each tasked organization’s standard operating procedures (SOP) for the period between notification and impact of an emergency. Measures to safeguard emergency management personnel, as well as vital records and existing equipment, should be part of an EOP.

Recovery Plans

Typically, an EOP does not spell out recovery actions beyond rapid damage assessment and the actions necessary to satisfy the immediate life support needs of disaster victims; the EOP should provide for a transition to a recovery plan, if any exists, and for a stand-down of response forces. However, some short-term recovery actions are natural extensions of response and are covered by the EOP. For example, meeting human needs would require maintaining logistical support to mass care actions initiated in the response phase, with the addition of crisis counseling; it would also involve restoration of infrastructure "lifelines," and

perhaps debris removal to facilitate response. At the State's discretion, its disaster assistance plans for distribution of Federal and State relief funds may be annexed to the EOP. Disaster assistance plans would identify how eligible aid recipients will be identified, contacted, matched to aid, certified, and issued checks.

Beyond that lies long-term recovery, which is not strictly time-sensitive and can sometimes be more *ad hoc*. Pre-disaster planning for long-term mitigation and recovery would involve identifying strategic priorities for restoration, improvement, and growth; here emergency management planning starts to intersect the community development planning of other agencies. FEMA recommends and supports the development of State and local hazard mitigation plans to facilitate and expedite obtaining Federal mitigation funds during the post-disaster recovery period.

Plans Versus Procedures

Although the distinction between plans and procedures is fluid, writers of an EOP should use it to keep the EOP free of unnecessary detail. The basic criterion is: What does the entire audience of this part of the EOP need to know, or have set out as a matter of public record? Information and "how-to" instructions that need be known only by an individual or group can be left to SOPs; these may be annexed to the EOP or referenced as deemed appropriate.

For many responsibilities in the EOP, it will be enough to assign the responsibility to an individual or organization and specify the assignee's accountability: to whom does he or she report, or with whom does he or she "coordinate"? For example, an EOP that assigns responsibility for putting out fires to the fire department would not detail what should be done at the scene or what fire equipment is most appropriate: The EOP would defer to the fire department's SOPs for that. The EOP would describe the relationship between the Incident Commander (IC) and the central organization that directs the total jurisdictional response to the emergency, of which the fire in question might be only a part. Likewise, the EOP would not detail how to set up facilities for emergency operations, leaving that for an SOP to be used by the responsible organization(s).

The emergency manager should work with the senior representatives of tasked organizations to ensure that SOPs needed to implement the EOP do in fact exist

and do not conflict with the EOP or one another.

This Guide does not establish requirements for the preparation of SOPs. However, SOPs should be developed by each organization tasked in the EOP. SOPs provide the means to translate organizational tasking into specific action-oriented checklists that are very useful during emergency operations. They tell how each tasked organization or agency will accomplish its assigned tasks. Normally, SOPs include checklists, call- down rosters, resource listings, maps, charts, etc. and give **step-by-step procedures** for notifying staff, obtaining and using equipment, supplies, vehicles, obtaining mutual aid, reporting information to organizational work centers and the emergency operating center (EOC), communicating with staff members that are operating from more than one location, etc. Development of certain procedures is required in REP, CSEPP, and Emergency Planning and Community Right-to-Know Act (EPCRA) planning.

Chapter 2
The Planning Process

Introduction

Normally, the emergency manager serves as the "planning coordinator" responsible for leading the jurisdiction's effort to develop an EOP. This chapter offers the emergency manager suggestions for the process of developing an EOP. This process may be more important and useful to the jurisdiction's emergency management community than the final product itself. The suggestions can be easily tailored to the specific needs of a jurisdiction.

Principles

Developing an all-hazard plan for protecting lives and property in the jurisdiction may appear to be an extremely difficult challenge. It need not be if following principles are applied.

Don't Reinvent the Wheel

Emergency operations planning need not start from scratch. Planners should take advantage of others' experience.

Use Available Guidance and Training Materials

The State is a valuable resource for the local jurisdiction. States typically publish their own planning guides, conduct workshops and training courses, and assign their planners to work with local planners. FEMA supports State training efforts through its Emergency Management Institute (EMI), and offers courses. FEMA also publishes many documents relating to planning for specific functions and hazards.

Build on What Exists in the Jurisdiction

If the jurisdiction has an EOP or other contingency plans, they are the place to start. Existing plans can point the planning coordinator to applicable authorities, perceptions of risk in the community, members of the jurisdiction's emergency response organization, mutual aid agreements with other jurisdictions, and more. The planning coordinator should review the existing EOP for questionable assumptions, inaccuracies, inconsistencies, omissions, and vagueness. Critiques of recent emergency operations and exercises in the jurisdiction will help the planning coordinator develop a sense of what needs to be done.

Don't Go It Alone

The planning coordinator's is only one view. If a coordinated emergency response depends on teamwork, planning for response should involve the jurisdiction's emergency "team." Documentary research should be supplemented by interviews with key officials of the jurisdiction's response organization: They may have information and insights that the planning coordinator lacks, as well as ideas that can spark creative solutions to problems. Key officials also determine what staff will be made available for planning meetings and what priority emergency planning issues will have in day-to-day work, so it is important to secure their commitment to the planning process.

Benefits of the Team Approach

FEMA recommends a team approach to planning for these reasons:

- The EOP is more likely to be used and followed if the tasked organizations have a sense of ownership, i.e., their views were considered and incorporated.
- More knowledge and expertise are brought to bear on the planning effort.
- Closer professional relationships among response and recovery organizations in the planning process should translate into better coordination and teamwork in emergencies.

Potential Team Members

The planning team should be drawn from various groups that have a role or stake in emergency response. The list below is not all-inclusive. The important thing is for the planning coordinator to ensure that the planning team membership represents a good cross section of the organizations involved in the jurisdiction's emergency response effort.

- The Office of the Chief Executive.
- Law enforcement, fire/rescue, and emergency medical services (including dispatchers/911 at the local level), public health and safety, etc.
- Existing planning agencies (e.g., community development, economic development, city planning commissions/municipal planners).

- Hazard mitigation planner/coordinator.
- Local Emergency Planning Committees (LEPC), for hazardous materials (HAZMAT) information.
- Public works agencies and utility companies.
- Social service agencies and volunteer organizations (e.g., American Red Cross (ARC), Salvation Army, etc.).
- Area hospitals, emergency medical service agencies, medical examiner, coroner, mortician, and other appropriate members of the medical community.
- Educational administrators.
- Public Information Officer (PIO).
- Local media.
- Industrial and military installations in the area.
- State aviation authority and/or others connected with provision of air support.
- Port authorities, U.S. Coast Guard station.
- The jurisdiction's Chief Financial Officer, auditor, and heads of any centralized procurement and resource support agencies.
- Jurisdiction's legal counsel.
- Labor and professional organizations.
- Organizations in the animal care and control community, including veterinary services.
- Amateur radio/CB groups, such as Radio Amateur Civil Emergency

Service (RACES), Radio Emergency Associated Communications Teams (REACT), etc.

- Emergency managers and agency representatives from neighboring jurisdictions, to coordinate mutual aid needs.
- State and/or Federal representatives, as appropriate.

Don't Forget the Chief Executive Official ("CEO")

Potential planning team members have many day-to-day concerns. For the team to come together, potential members must be convinced that emergency planning has a higher priority--and the person to convince them is the jurisdiction's chief executive. The emergency manager has to enlist the chief executive's support for and involvement in the planning effort. To do so, the emergency manager must show the chief executive what is at stake in emergency planning: share the hazard analysis for the jurisdiction, describe what government and especially the chief executive will have to do, color presentations with images from disasters like those that could befall the jurisdiction, discuss readiness assessments and exercise critiques, and remind the chief executive that planning ultimately facilitates his or her job in an emergency. Any backing available from the chief executive's office will help the emergency manager to obtain the respectful cooperation of other agency heads.

Steps

Following are the basics for development and continual refinement of an EOP. They may be adapted to the needs of a jurisdiction.

Research

The first step is research. This consists of reviewing the jurisdiction's planning framework, analyzing the hazards faced by the jurisdiction, determining the resource base, and noting characteristics of the jurisdiction that could affect emergency operations.

Review Law, Plans, Mutual Aid Agreements, and Guidance

Review local and/or State laws, rules, regulations, executive orders, etc., that may be considered enabling legislation. Review Federal regulatory requirements. Review guidance, existing plans for the jurisdiction, and the plans of neighboring jurisdictions. Review agreements with neighboring jurisdictions, military installations, private sector organizations, etc. Become familiar with the

plans of higher levels of government that may be called on to provide assistance.

Conduct Hazard/Risk Analysis

Hazard analysis is the basis for both mitigation efforts and EOPs. From an emergency operations planning perspective, hazard analysis helps a planning team decide what hazards merit special attention, what actions must be planned for, and what resources are likely to be needed.

Comprehensive hazard analysis merits its own document-length discussion. Chapter 6 offers some considerations for specific hazards, and the Bibliography lists sources for both general concepts and hazard-specific information. However, for purposes of emergency operations planning, basic considerations of process, methods, and sources include the following:

- *Process and Methods*. Hazard analysis requires the planning team to:

  - *Identify hazards*, to know what kinds of emergencies have occurred or could occur in the jurisdiction.

    - Begin with a list of hazards that concern emergency management in your jurisdiction. Laws, previous plans, and elected officials can help define the universe of hazards which the planning team should address in the all-hazard EOP. A list of "traditional" emergency management concerns might include: airplane crash, avalanche, dam failure, drought, earthquake, epidemic, flood, HAZMAT release (in transport or from a fixed facility), hurricane, landslide, mudslide, power failure (sustained), radiological release (in transport or from a fixed facility), subsidence, terrorism, tornado, train derailment, tsunami, urban conflagration, volcanic eruption, wildfire, and winter storm.

> *Keep in mind that hazard lists pose two problems. The first is the possibility of exclusion or omission: there is always a potential for new and unexpected hazards (which is part of why maintaining an all-hazard capability is important). The second is that such lists involve groupings, which can affect subsequent analysis. A list may give the impression that hazards are independent of one another, when in fact they are often related (e.g., an*

earthquake might give rise to dam failure). Lists may group under one category very different causes or sequences of events that require different types of response. For example, "flood" might include dam failure, cloudbursts, or heavy rain upstream. Lists also may group a whole range of consequences under the category of a single hazard. "Terrorism," for example, could include use of conventional explosives against people or critical infrastructure; nuclear detonation; release of lethal chemical, biological, or radiological material; and more. "Hurricane" might include not only high winds, storm surge, and battering waves, but even the weakened, post-landfall tropical storm system that can cause inland flooding. It may be necessary, as the hazard analysis evolves, to refine the list of hazards.

– For each of these potential emergencies, determine whether it has happened or could happen in the jurisdiction. Some can be eliminated by common sense (e.g., where mountains do no exist, volcanic eruption is not likely). For the rest, there are three lines of investigation: history (including statistical compilations), expert opinion, and maps--which summarize results of the first two.

- *Profile hazards and their potential consequences*, to have the information necessary for the next two steps (and to set the stage for other applications of the hazard analysis). The categories of information and the precision of the data will depend on several factors. One is the kinds of decisions the analysis is meant to support. For example, to decide that one hazard poses more of a threat than another may require only a qualitative estimate (e.g., "High" vs. "Medium")--but to plan for health and medical needs the planning team would want to have an estimate for likely fatalities and injuries. Another factor is the availability of information and time. It may be necessary to take a long view of hazard analysis, and have each version build on the preceding one as part of a "research agenda" for emergency management.

  - Develop information on each of the hazards identified for the community. Of particular interest are the hazard's **frequency** of occurrence (both historical and predicted or probable, as available), **magnitude** and

intensity, **location** (if the hazard is associated with a facility or landscape feature) and **spatial extent** (either around the known location of the hazard or as an estimate for non-localized hazards like tornado), **duration**, **seasonal pattern** (based on month by month historical occurrence), **speed of onset**, and **availability of warning**.

– Develop information on the potential consequences of the hazard. This depends on identifying a vulnerable zone (if the hazard is localized) or relating the estimated spatial extent of the hazard to the jurisdiction (by a simple ratio of the hazard's extent to the jurisdiction's area, to get gross estimates of lives and property at risk, or by "overlaying" the estimated spatial extent of the hazard on a portion of the jurisdiction and determining what would be affected). Several kinds of consequences can be investigated; response planning would be concerned with effects on people (total affected, likely deaths and injuries), critical facilities and community functions, property, and sites of potential secondary hazards (e.g., dams, chemical processing plants). The planning team can use both historical information and modeling to arrive at estimates for planning. In modeling, the general process is to consider what is exposed to a given intensity of the hazard, how susceptible it is to a type of damage or consequence (e.g., death, for people; destruction, for property; days of service loss or repair time for critical facilities), and some measure of loss (e.g., dollars, for property). Over time, collection of this information can be made easier by sectoring the jurisdiction (optimally, in sectors that will also be used for damage assessment) and developing a profile of each sector: e.g., rough number of structures falling into different classes of construction, number of different kinds of critical facilities, rough number of people in different age groups

or having special needs, etc.

- *Compare and prioritize risks*, to determine which hazards merit special attention in planning (and other emergency management efforts). The planning team must consider frequency of the hazard and the likely or potential severity of its consequences, to develop a single indicator of the threat: This allows comparison and setting of priorities. While a mathematical approach is possible, it is easier to manipulate qualitative ratings (e.g., "High", "Medium", "Low") or index numbers (e.g., reducing quantitative information to a 1 to 3, 1 to 5, or 1 to 10 scale, based on defined thresholds) for different categories of information used in the ranking scheme. Some approaches involve consideration only of frequency and consequences, and treat the two categories as equally important. In other approaches, potential consequences receive more weight than frequency.

- *Create and apply scenarios*, to brainstorm needed hazard-specific planning provisions and estimate hazard-specific resource requirements. While it is important to have a sense of magnitudes involved (whether the single indicator used to rank hazards, or estimated numbers of people affected), these are static. Planning is concerned with actions that take place in time. For the top-ranked hazards, or hazards that rate above a certain threshold, the planning team should consider scenarios. Using information from the profile, the planning team should think about how the hazard occurrence would develop in the jurisdiction. Starting with a given intensity of the hazard, the team can imagine the hazard's development from initial warning (if available) to its impact on a specific part of the jurisdiction (as identified through analysis) and its generation of specific consequences (e.g., collapsed buildings; loss of critical services and infrastructure; death, injury, or displacement). Through this initial brainstorming--which can be refined in formal tabletop exercises--the team will decide what actions and resources will become necessary. It will also become conscious of the

planning assumptions to be used in functional annexes and hazard-specific appendices to the EOP (discussed in the following chapters of this Guide).

- *Sources*. Sources of maps for hazards would include compilations of hazard information made by FEMA and State emergency management agencies, the U.S. Geological Survey (USGS) and State geological surveys, and the National Weather Service (NWS) and its local offices. For more localized hazards, maps from the Federal Insurance Administration (FIA), maps of 10- and 50-mile Emergency Planning Zones (EPZ) around nuclear power plants, and any maps of HAZMAT sites prepared by the LEPC would be useful. For historical investigation, many potential sources exist. Consult Federal or State hazard analyses, as appropriate, to see if the historical occurrence of the hazard is tabulated by jurisdiction. Also interview representatives from organizations on the planning team about their experience. Check local ARC disaster records. Check police, fire, and other responder records. Research area newspapers at the library. Check with utilities and businesses/facilities that have operated in the area for some time. Involve the local or State historical society, and perhaps area universities (e.g., departments of history, sociology, geography, engineering). Professional or business associations (e.g., of insurers, engineers and builders, etc.) may have useful information. Long-time community residents can even contribute. For expert opinion on hazard potential, the sources are similar. Federal, State, and local agencies; academic, industrial, and public interest group researchers (or private consultants specializing in hazard analysis); and professional associations concerned with the hazards on your list should be able to help, either through interviews or publications. Sources for information on the community and possible consequences to it vary. Ideally, work already will have been done regarding potential consequences of certain facility-based hazards--and it is a matter of checking with the facility and the agency (local, State, Regional, or Federal) that

regulates that kind of facility. For demographics, Census data are available, as are off-the-shelf computer products that organize such data by ZIP code. The planning team also should make extensive use of the information about the jurisdiction that is constantly developed within the jurisdiction. The local planning and zoning commission or department, for example, probably has extensive data on demographics, on land use, on numbers and types and--with the tax assessor and/or local realtors' association--value of buildings, and on the structural integrity of buildings (or at least on the code to which they were to be built, and what that code was and was not designed to do regarding hazard effects). The local public works (or civil engineering) department and utilities are the obvious sources for information on potential damage to and restoration time for the critical infrastructure threatened by hazard effects. The Chamber of Commerce may offer a perspective on damage to business and general economic loss. Other sources of information mentioned previously--emergency service logs and reports, universities, professional associations, etc.-- also apply.

Use of Standard Loss Estimation Methodologies and GIS-Based Methodology Software HAZUS for Conducting Hazard/Risk Analysis: *FEMA and the States have committed to the development of an all-hazard risk assessment capability as a Mitigation objective under the PPA. Therefore, in the near future, the process of analyzing and defining the risk associated with a given natural hazard and making a scientifically and technically valid assessment of the impact on a given area or region, will be feasible by using standard, nationally applicable loss estimation methodologies and a methodology software program called HAZUS developed by FEMA. State and local emergency managers will find these methodologies and HAZUS to be valuable tools to aid them in all phases of emergency management--preparedness, response, recovery, and mitigation.*

As early as January 1997, FEMA's standard Earthquake Loss Estimation Methodology and HAZUS will be available to States. This GIS-based software program can be used to generate an estimate of the consequences of a "scenario earthquake"--that is, an earthquake with a specified magnitude and location--and provide a "loss estimate" that describes the scale and extent of the damage and disruption that may result. To achieve an all-hazard risk assessment capability, FEMA is currently developing loss estimation

methodologies for other hazards, such as flood, wind, and hurricane, that will expand the capability of HAZUS. These are expected to be available in the next two or three years. In return, States are encouraged under the PPA/Cooperative Agreement process to collect digital building inventory and hazard data from State, local, and private sources and to incorporate that data into HAZUS with the objective of refining the results of loss estimates and other analyses conducted using HAZUS.

Therefore, local jurisdictions may wish to consult with FEMA or their State Emergency Management Agency when they begin to develop an EOP to determine whether their State has obtained and implemented HAZUS and, if so, how it can be used to help them identify potential hazards and characterize risk associated with the occurrence of those hazards.

Determine the Resource Base

Agency heads and other potential members of the planning team should know what kinds of resources they can bring to emergency response and recovery. The problem is to quantify and list them, and compare the resources available to the resources needed for an effective emergency response. Shortfalls may require negotiating agreements with private suppliers or other jurisdictions. Determination of the resource base also should include a consideration of what facilities are vital to emergency operations and how they might be affected by hazards: Problems that cannot be mitigated should be taken into account in the EOP, not assumed away.

Note Special Facets of the Planning Environment

The planning team should note geographic and topographic features that may affect operations--for example, dependence on a single main transportation artery in and out of the jurisdiction. Planners also should identify special needs groups (non-English speakers, the aged, the disabled) and where they are concentrated (especially institutions such as nursing homes). Finally, the planning team should be alert to demographic and other trends in the jurisdiction that affect assumptions.

Development

Research leads to a written EOP through steps similar to these:

- Develop a rough draft of the basic plan, functional annexes, and hazard-specific appendices to serve as a point of departure for the planning team.

- Develop agendas and invitation lists for first cycle of planning meetings; perhaps deliver invitations in person and conduct preliminary interviews

with key officials.

- Brief the "CEO" and perhaps invite him or her as a keynote speaker.
- Conduct a presentation meeting, establish committees for parts of the EOP, appoint committee chairs, and schedule a follow-up meeting.
- Work with committees on successive drafts.
- Prepare necessary graphics (e.g., maps, organizational charts).
- Produce a final draft and circulate the draft to the planning team for review and comment.
- Hold a meeting to incorporate final changes, discuss an implementation strategy and necessary distribution, and obtain (informal) commitments to provide information that could necessitate revision.
- Obtain concurrence from organizations with identified responsibilities for implementing the EOP.
- Present the EOP to local elected officials and obtain official promulgation of the EOP (advise the local media in advance).
- Print and distribute the EOP, with a copy (or press release) to local media. Maintain a record of the organizations and persons that received a copy (or copies) of the plan.

Validation The written EOP should be checked for its conformity to applicable regulatory requirements and the standards of Federal or State agencies (as appropriate)--and for its usefulness in practice. Further, conduct of a "table top" exercise involving the key representatives of each tasked organization may serve as a practical and useful means to help validate the plan.

Plan Review Consult the next level of government about its EOP review cycle. Plan reviews allow responsible agencies to suggest improvements in an EOP based on their accumulated experience. States may review local EOPs; FEMA Regional

offices may assist States in the review of EOPs, upon request. Hazard-specific Federal programs (such as the REP program) require periodic review of certain sections of the all-hazard EOP, and may require review of associated SOPs.

Plan Testing

To evaluate new or revised EOP, use functional and full scale emergency management exercises. Exercises offer the best way, short of emergencies, to determine if an EOP is understood and "works."

Maintenance

The EOP is a living document. Problems emerge, situations change, gaps become apparent, Federal requirements are altered--and the EOP must be adapted to remain useful and up-to-date.

Remedial Action Process

A remedial action process can help a planning team identify, illuminate, and correct problems with the jurisdiction's EOP. A remedial action process captures information from exercises, post-disaster critiques, self-assessments, audits, administrative reviews, and the like, which may indicate that deficiencies exist. It then brings members of the planning team together to discuss the problem, and to consider and assign responsibility for remedies. Remedial actions may involve revising planning assumptions and operational concepts, changing organizational tasks, or modifying organizational implementing instructions (SOPs). They also may involve refresher training on performance of tasks assigned by the EOP to an organization's personnel. The final component of a remedial action process is a means to track and follow up the assigned actions.

Revision Process

Establish a process for review and revision of the EOP. Review should be a recurring activity, accomplished on at least an annual basis. As appropriate, significant issues and problems identified through a remedial action process and/or the annual review should provide the information needed to allow the planning team to make the necessary revision(s) to the plan.

Implementing Documents

Ensure that each tasked organization or individual develops the SOPs necessary to facilitate the accomplishment of assigned tasks. The EOP does not anticipate every detail of the tasks it describes--but the details are important to its implementation.

Chapter 3
Emergency Operations Plan Format

Introduction

A planning team's chief concern will be to include all essential information and instructions in the EOP. Poor organization of that information can limit the EOP's effectiveness.

FEMA does not mandate a particular format for EOPs. In the final analysis, an EOP's format is "good" if the EOP's users understand it, are comfortable with it, and can use it to extract the information they need. When that test is not met--in training, exercises, actual response, plan review and coordination meetings, and the like--some change of format may be necessary.

In designing a format for an all-hazard EOP and in reviewing the draft, the planning team should consider the following:

- *Organization*. Do the EOP subdivisions help users find what they need, or must users sift through information that is irrelevant? Can single subdivisions be revised without forcing a substantial rewrite of the entire EOP?

- *Progression*. In any one section of the EOP, does each element seem to follow from the previous one, or are some items strikingly out of place? Can the reader grasp the rationale for the sequence and scan for the information he or she needs?

- *Consistency*. Does each section of the EOP use the same logical progression of elements, or must the reader reorient himself or herself in each section?

- *Adaptability*. Is information in the EOP organized so that the EOP may be used in unanticipated situations?

- *Compatibility*. Does the EOP format promote or hinder coordination

with other jurisdictions, including State and/or Federal Government? Are problems in this area more easily solved by reformatting the EOP or by making a chart of the coordination relationships (i.e., a "crosswalk")?

This chapter outlines a format based on FEMA's experience with these concerns. Again, **the format is not mandated.**

A Functional Approach to the Overall Structure of the EOP

Concept

While the causes of emergencies vary greatly, the potential effects of emergencies do not. This means that jurisdictions can plan to deal with effects common to several hazards, rather than develop separate plans for each hazard. For example, earthquakes, floods, and hurricanes all can force people from their homes. The jurisdiction can develop a plan and an organization around the task, or *function*, of finding shelter and food for the displaced--with minor adjustments for the probable rapidity, duration, location, and intensity of different hazards if desired. It can do the same for other common tasks (see Chapters 5 and 6 for a discussion of selected functions and of hazard-specific adjustments that can be made). In fact, a critical aspect of planning for the response to emergency situations is to identify all of these common tasks, or *functions*, that must be performed, assign responsibility for accomplishing each function, and ensure that tasked organizations have prepared SOPs that detail how they will carry out critical tasks associated with the larger function.

However, the plans for performing each function should not be created in isolation. Since the jurisdiction's goal is a coordinated response, task-based plans should follow from a Basic Plan that outlines the jurisdiction's overall emergency organization and its policies (see Chapter 4).

Components

EOPs developed using the functional approach consist of a Basic Plan, functional annexes, and hazard-specific appendices. These are supplemented by the SOPs and checklists necessary for implementation of the EOP.

The Basic Plan

The Basic Plan is an overview of the jurisdiction's emergency response organization and policies. It cites the legal authority for emergency operations, summarizes the situations addressed by the EOP, explains the general concept

of operations, and assigns responsibilities for emergency planning and operations.

Functional Annexes

Functional annexes are plans organized around the performance of a broad task. Each annex focuses on one of the critical emergency functions that the jurisdiction will perform in response to an emergency. The number and type of functional annexes included in the EOP may vary from one jurisdiction to another, depending on needs, capabilities, and organization. Since functional annexes are oriented toward operations, their primary audience consists of those who perform the tasks. They do not repeat general information contained in the Basic Plan.

Hazard-Specific Appendices

Hazard-specific appendices provide additional detailed information applicable to the performance of a particular function in the face of a particular hazard. They are prepared when hazard characteristics and regulatory requirements warrant and are attached to the relevant functional annex(es).

SOPs and Checklists

SOPs and checklists provide the detailed instructions that an organization or an individual needs to fulfill responsibilities and perform tasks assigned in the EOP. They may be attached to the EOP or referenced as deemed appropriate.

Options

Creating a different plan for each hazard is an option, but not one that FEMA recommends. The functional approach:

- Avoids duplication of the planning effort for every hazard and for every task, by dividing the EOP into four levels of specificity (Basic Plan, functional annexes, hazard-specific appendices, and SOPs).
- Serves in all hazard situations, even unanticipated ones, by organizing the EOP around performance of "generic" functions.
- Permits *emphasis* on hazards that pose the greatest risk to a jurisdiction, through the use of hazard-specific appendices.

A Task-Based Approach to Each Section of the EOP

Concept

A standard format for the Basic Plan, functional annexes, and hazard-specific

appendices will make the EOP easier to use. The parts of an EOP can be structured around the problem to be solved, the objective to be attained, or the task to be performed. The following format is based on an easily understood, common-sense approach: definition of objective, characterization of the situation, general plan of action, delegation of responsibilities, and information on resources and administrative support necessary for accomplishing the tasks.

Components

FEMA recommends a format consisting of: Purpose, Situation and Assumptions, Concept of Operations, Assignment of Responsibilities, Administration and Logistics, Plan Development and Maintenance, and Authorities and References. Chapter 4 describes these components in more detail.

Options

This is a common, proven plan format that is easily understood. Possible modifications include:

- Listing all agencies involved in an annex immediately after the purpose statement, to permit even faster scanning of who does what.
- Setting forth "policies" in a section separate from those on situation and assumptions or concept of operations.

Consistent application of this or a similar format throughout the EOP will help the reader scan the document quickly for necessary information.

Chapter 4
Basic Plan Content

Introduction

The Basic Plan, as defined in Chapter 3, provides an overview of the jurisdiction's approach to emergency operations. It details emergency response policies, describes the response organization, and assigns tasks. Although the Basic Plan guides development of the more operationally oriented functional annexes, its primary intended audience consists of the jurisdiction's chief executive, his or her staff, and agency heads. The Basic Plan elements listed in this chapter--not necessarily in the order presented or under the headings given here--should meet the needs of this audience while providing a solid foundation for development of functional annexes.

Elements of the Basic Plan

Introductory Material

The EOP should be prefaced by certain items that enhance accountability and ease of use. Among these are the promulgation document, the signature page, the dated title page and the record of changes, the record of distribution, and the table of contents.

Promulgation Document

The promulgation document enters the EOP "in force"; it gives the EOP official status and provides both authority and responsibility for organizations to perform their tasks. The promulgation document is usually a letter signed by the jurisdiction's chief executive. In it, the chief executive might declare simply that the EOP is in force, perhaps citing the legal basis for his or her authority to make that declaration. However, the promulgation document also should mention tasked organizations' responsibility to prepare and maintain SOPs and commit them to the training, exercises, and plan maintenance efforts needed to support the EOP. The promulgation document also allows the chief executive to affirm his or her support for emergency management.

Signature Page

Some jurisdictions may choose to include a signature page to show that, prior to seeking the chief executive's signature, all response organizations tasked in the EOP have coordinated in the plan's development and are committed to its

effective implementation.

Dated Title Page and Record of Changes

The title page should bear the date of publication; a record of changes can be a chart containing a number assigned to any change, a description of the change and/or the affected part of the EOP, the date of the change, the date of its actual entry into the EOP, and the signature or initials of the person responsible. These items should be included so users of the EOP can be certain that everyone is using the most recent version of the EOP.

Record of Distribution

This is a list of individuals and organizations that receive a copy of the EOP. The record of distribution can be used to provide evidence that tasked individuals and agencies have had the opportunity to read and understand their responsibilities, which is a basic assumption of an EOP. To that end, copies may be numbered and the record may show both a date of transmittal and a date on which receipt is confirmed. The record of distribution also serves as a convenient checklist for distributing later revisions to the plan. Note that the list need not be limited to response organizations. Since the public has an interest in emergency preparedness measures, copies of the EOP (without SOPs, call-down lists, and other sensitive information) can be made available to public libraries, as well as to media contacts. Neighboring jurisdictions also should receive copies of the EOP. For the sake of convenience, a long record of distribution may be treated as a stand-alone annex and placed at the end of the EOP, or kept separate as an "administrative" document.

Table of Contents

A table of contents makes finding information easier. It provides a quick topical overview of the EOP. The table of contents should list all sections of the EOP and be supported with clearly labeled tabs for each section.

Purpose

The rest of the EOP flows logically from its purpose. The Basic Plan should contain a general statement of what the EOP is meant to do. The statement should be supported by a brief synopsis of the Basic Plan, the functional annexes, and the hazard-specific appendices.

Situation and Assumptions

After the broad statement of purpose, the situation and assumptions section narrows the scope of the EOP by outlining what hazards the EOP addresses, what characteristics of the jurisdiction may affect response activities (and how), and what information used in preparing the EOP must be treated as assumption

rather than fact. Policies also circumscribe and affect response activities, and could be treated either as part of the situation or in a separate section, if desired.

Situation

The situation section characterizes the "planning environment"--and so makes clear why emergency operations planning is necessary. The situation section should, at a minimum, draw from the jurisdiction's hazard identification and analysis. The situation section may include relative probability and impact of the hazards, geographic areas likely to be affected by particular hazards, vulnerable critical facilities (nursing homes, schools, hospitals, etc.), population distribution, characteristics and locations of special populations (institutionalized persons, the elderly and disabled, those who speak languages other than English, etc.), critical resource dependencies on other jurisdictions, and more. The level of detail is a matter of judgment; some information may be deemed useful to a few specific functional annexes and presented there. In any event, maps should be included (as tabs) to support the situation description.

Assumptions

Assumptions are simply that: what, in developing the EOP, has been treated as true for the EOP's execution. These should be included to show the limitations of the EOP, allowing EOP users (and others) to foresee that some improvisation or modification may become necessary. It is valid to include even "obvious" assumptions: that identified hazards will occur (scenarios, if used, can be outlined), that individuals and organizations are familiar with the EOP and will execute their assigned responsibilities, that assistance may be needed, and that--if so--assistance will be available.

Concept of Operations

The audience for the Basic Plan needs to picture the sequence and scope of the planned emergency response. The concept of operations section explains the jurisdiction's overall approach to an emergency situation, i.e., what should happen, when, and at whose direction. Topics should include: division of local, State, Federal, and any intermediate interjurisdictional responsibilities; activation of the EOP; "action levels" and their implications (if formalized in the jurisdiction); general sequence of actions before, during, and after the emergency situation; who requests aid and under what conditions (the necessary forms being contained in tabs); and, for States, who appoints a State Coordinating Officer (SCO) and how the SCO and the State response organization will coordinate and work with Federal response personnel in

accordance with the FRP (see Chapter 7). The concept of operations will touch on direction and control, alert and warning, or continuity of operations matters that may be dealt with more fully in annexes.

Organization and Assignment of Responsibilities

This section of the Basic Plan establishes the emergency organization that will be relied on to respond to an emergency situation. It includes a listing by position and organization of what kinds of tasks are to be performed; such a listing permits a quick grasp of who does what, without some of the procedural details included in functional annexes. When two or more organizations perform the same kind of task, one should be given primary responsibility and the other(s) should be given a supporting role. For the sake of clarity, a matrix of organizations and areas of responsibility (including functions) should be included to show at a glance the primary and supporting roles (see Table 4-1 for an example). However, shared general responsibilities--such as developing SOPs--should not be neglected. The listing by organizations might also include organizations not under jurisdictional control, if they have defined responsibilities for responding to emergencies that might occur in the jurisdiction.

The following are examples of the types of tasking that should be assigned to agencies, organization chiefs, and individuals in the Basic Plan (but please note that specific tasking related to the critical operational activities each organization is responsible for accomplishing are detailed in each of the functional annexes to the EOP and are addressed in Chapter 5 of this Guide).

Chief Executive Official ("CEO")

- Sets policy for the emergency response organization.
- Assumes responsibility for the overall response and recovery operations.
- Authorizes the mitigation strategy for recovery.
- Identifies by title or position the individuals responsible for serving as IC(s), EOC Manager, Health and Medical Coordinator, Communications Coordinator, Warning Coordinator, PIO, Evacuation Coordinator, Mass Care Coordinator, and Resource Manager.

- Identifies by title or position the individuals assigned to work in the EOC during emergencies.

Fire Department	Manages fire department resources and directs fire department operations.
Police Department	Manages law enforcement resources and directs traffic control and law enforcement operations.
Health and Medical Coordinator	➢ Coordinates the use of health and medical resources and personnel involved in providing medical assistance to disaster victims. ➢ Meets with the heads of local public health, emergency medical (EMS), hospital, environmental health, mental health, and mortuary services, or their designees, to review and prepare emergency health and medical plans and ensure their practicality and interoperability. When appropriate, includes local representatives of professional societies and associations in these meetings to gain their members' understanding of and support for health and medical plans. ➢ Meets with representatives of fire and police departments, emergency management agencies, military departments, State and Federal agencies, and the ARC to discuss coordination of disaster plans.
Public Works	➢ Manages public works resources and directs public works operations (e.g., water supply/treatment, road maintenance, trash/debris removal). ➢ Coordinates with private sector utilities (e.g., power and gas) on shutdown and service restoration. ➢ Coordinates with private sector utilities and contractors for use of private sector resources in public works-related operations.
Warning Coordinator	➢ Determines warning resource requirements. ➢ Identifies warning system resources in the jurisdiction that are available

to warn the public.

- Performs a survey to establish warning sites.
- Identifies areas to be covered by fixed-site warning systems.
- Develops procedures to warn areas not covered by existing warning systems.
- Develops special warning systems for those with hearing and sight disabilities.
- Develops means to give expedited warning to custodial institutions (e.g., nursing homes, schools, prisons).
- Coordinates warning requirements with the local Emergency Alert System (EAS) stations, and other radio/TV stations in the jurisdiction.
- Develops a chart of various warning systems, applicability of each to various hazards, and procedures for activating each.
- Coordinates planning requirements with the EOC Manager.

EOC Manager

(Note: In many jurisdictions, this function is performed by the emergency manager.)

- Manages the EOC as a physical facility (e.g., layout and set-up), oversees its activation, and ensures it is staffed to support response organizations' needs.
- Oversees the planning and development of procedures to accomplish the emergency communications function during emergency operations.
- Ensures a sufficient number of personnel are assigned to the communications and Information Processing sections in the EOC.
- Oversees the planning and development of the warning function.

- Reviews and update listings including phone numbers of emergency response personnel to be notified of emergency situations.
- Designates one or more facilities to serve as the jurisdiction's alternate EOC.
- Ensures that communications, warning, and other necessary operations support equipment is readily available for use in the alternate EOC.

Emergency Manager

- Coordinates with the Communications Coordinator, Warning Coordinator, PIO, Evacuation Coordinator, Health and Medical Coordinator, Resource Manager, and the Mass Care Coordinator to ensure necessary planning considerations are included in the EOP.
- Coordinates with the local chapter of the ARC, Salvation Army, other public service non-profit organizations, the School Superintendent, etc., as appropriate to identify a lead organization, if possible, and personnel to perform mass care operations jobs.
- Coordinates volunteer support efforts to include the activities of volunteers from outside the jurisdiction and the assistance offered by unorganized volunteer and neighborhood groups within the jurisdiction.
- Works with the PIO to develop emergency information packets and emergency instructions for the public.
- Coordinates planning requirements with the emergency management staff in neighboring jurisdictions that have been identified as potentially hazard-free and have agreed to house evacuees in their mass care facilities.
- Coordinates the provision of mass care needs for personnel performing medical duties during catastrophic emergencies.
- Assists, as appropriate, the animal care and control agency staff's efforts to coordinate the preparedness actions needed to protect and care for animals during and following catastrophic emergencies.

- Assists the Resource Manager as needed to prepare for response operations:
  - Convenes planning meetings for the function in consultation with (or on the advice of) the Resource Manager.
  - Designates Emergency Management Agency staff to serve in key posts, as appropriate. (Whether the Resource Manager should be an emergency management official--given the emergency resources focus--or a Department of General Services person is left to the discretion of the jurisdiction.)
- Advocates that mitigation concerns be addressed appropriately during response and recovery operations.

Communications Coordinator

- This individual is responsible for the management of all emergency communications systems and will set emergency systems operations protocol for all emergency communications operations. The coordinator:
  - Assembles a team of representatives from the government departments and public service agencies involved in emergency operations to develop a communication procedure that will be responsive to the jurisdiction's needs and compatible with the communication procedures used by emergency response organizations.
  - Identifies communications and warning resources in the local government available to the EOC.
  - Identifies and designates private and public service agencies, personnel, equipment, and facilities that can be used to augment the jurisdiction's communications capabilities. For example, developing procedures with RACES or other available local communications resources and arranging for emergency augmentation of communications capabilities.

- Designates personnel to serve on the Communications Section Team.

- Surveys communications equipment sites for power sources and locations.

- Analyzes equipment locations in relation to potential hazards and disaster conditions.

- Coordinates emergency communications and warning frequencies and procedures with EOCs at higher levels of government and with neighboring communities.

- Identifies a repair capability available under emergency conditions and coordinates repair and maintenance activities.

- Arranges training programs for all communications staff, including volunteers and repair personnel.

Public Information Officer (PIO)

- ➢ Advises the Emergency Manager and "CEO" on matters of emergency public information (EPI).
- ➢ Establishes and maintains a working relationship with local media.
- ➢ Prepares a call-down list for disseminating EPI to groups that do not have access to normal media (e.g., schoolchildren).
- ➢ Prepares emergency information packets for release; distributes pertinent materials to local media prior to emergencies; and ensures that information needs of visually impaired, hearing impaired, and non-English speaking audiences are met.
- ➢ Coordinates with the animal care and control agency to obtain information for dissemination to the public on the appropriate action that should be taken to protect and care for companion and farm animals,

and wildlife during disaster situations.

Evacuation Coordinator

- Coordinates all evacuation planning activities with the Emergency Manager.

- Identifies high-hazard areas and determines population at risk; prepares time estimates for evacuation of the people located in the different risk area zones. Accomplishment of these tasks requires the preparation of a threat summary, based on the jurisdiction's hazard analysis. The summary quantifies the specific evacuation needs of the jurisdiction. It addresses the evacuation planning needs that are applicable to the hazards that threaten the people living in the jurisdiction. Typical threats include: hazardous materials accidents involving the facilities that use, store, manufacture, or dispose of them and the transport modes (planes, trains, boats, trucks, pipelines, etc.) used to move them; flooding as a result of snow melt or torrential rains in flood prone and/or low lying areas subject to flash floods; coastal and inland flooding caused by tidal surge and rain, and the wind damage associated with hurricanes and tropical storms; flooding of locations downstream from dams; areas subject to wildfire; areas subject to major seismic activity; areas within a 10-mile radius of nuclear power plants; populations at risk to war-related threats including attacks involving nuclear, chemical, or biological weapons, and other situations involving terrorist activities.

- Identifies transportation resources (e.g., public transit, school buses, etc.) likely to be available for evacuation operations; prepares an inventory of vehicle resources (public and private buses, public works trucks, commercial bus companies, trucking companies, truck rental companies, rail services, marine/ferry, air services, ambulance services, etc.).

- Assists facilities that provide care for special needs populations to develop a facility evacuation plan.

- Develops information for evacuees' use on the availability and location of mass care facilities away from the threat of further hazard-induced

problems.

- Assists, as appropriate, the animal care and control agency staff's coordination of the preparedness actions that are needed to prepare for the evacuation of animals during catastrophic emergencies.

Mass Care Coordinator

- Surveys buildings to select the safest and best possible for use as mass care facilities.
- Prepares a list that identifies the buildings that have been selected for use as mass care facilities and the number of people that can be housed in each.
- Compares mass care facility locations with potential hazards and disaster conditions.
- Prepares a resource list that identifies the agencies that are responsible for providing the resources (cots, blankets, beds, food, water, candles, medical and sanitation supplies, communication gear, backup power sources, etc.) required to set up and sustain operations in each mass care facility.
- Makes provisions to ensure the following items are available in sufficient quantities for use in mass care facilities, when opened (these stocks may be pre-positioned or delivered at the time of need):
  - Food supplies.
  - Water and sanitary supplies.
  - Clothing, bedding, and other supplies.
  - First Aid/medical supplies, as appropriate.
- Prepares necessary agreements to guarantee access to those non-government owned facilities that have been designated for mass care use during emergencies.

- Designates a mass care facility manager and identifies staffing requirements for each mass care facility.
- Makes necessary arrangements to ensure mass care staff members are trained.
- Prepares a manager's kit for the designated manager in each mass care facility.
- Coordinates with the Emergency Manager and PIO to develop a public information program to make citizens aware of availability and location of mass care facilities.
- Develops a mass care operations organization chart.
- Manages mass care activities during emergencies.
- Coordinates mass care activities with the Emergency Manager.
- Assists, as appropriate, the animal care and control agency staff's coordination of the preparedness actions that should be accomplished in order to feed, shelter, and provide medical treatment for animals during and after catastrophic emergencies.

Resource Manager

- Manages and directs resource support activities during large-scale emergencies and disasters.
- Chairs planning meetings for the function.
- Ensures that resource listings and/or the resource database is current.
- Ensures that necessary agreements and appropriate public information materials (e.g., regarding donations) are in place.
- Coordinates resource planning activities with the Emergency Manager.

Education Department/ Superintendent of Education

- Develops and periodically exercises a student evacuation plan.
- Coordinates with the Evacuation Coordinator to work out arrangements to use school buses to transport school children and other evacuees.
- Coordinates with the Mass Care Coordinator to work out arrangements to use schools and/or their food stocks for mass care.
- Coordinates with the Mass Care Coordinator for the transport of school children to mass care facilities.

Animal Care and Control Agency

- (Note: In some jurisdictions the responsibilities assigned to this organization may be performed by the State, non-profit, or volunteer organizations. For example, the State might assign the State Veterinarian or someone from the Department of Agriculture to assume responsibility for this activity, whereas a local jurisdiction might assign responsibility to a governmental animal control department or contract with a non-profit or volunteer organization, such as the Humane Society or Society for the Prevention of Cruelty to Animals (SPCA).)
- Coordinates the services and assistance provided to the animal victims. Activities may include the protection, care, and disposal (if appropriate) of animal victims impacted by disasters.
- Coordinates preparedness activities with the appropriate public and private sector organizational representatives. These activities include planning that addresses provisions for protection of companion and farm animals, wildlife, animals in zoos and aquarium parks, animal shelters, animal research facilities, university medical and animal science centers, pet stores, etc. Note that extensive coordination with State/local agencies such as fish and game departments; farm bureaus; wildlife, natural resources, and agriculture departments; game wardens; the jurisdiction's Emergency Management Agency staff; the individuals tasked in the EOP to serve as the Evacuation and Mass Care Coordinators, PIO, Health and Medical Coordinator, Resource Manager, etc. and other non-government organizational representatives from the ARC, Humane Society, American Veterinary Medical

Association, State veterinarians associations, veterinary technician associations, live stock and horse associations, kennel clubs, and other animal protection volunteer groups will be necessary to ensure the needs of animals are met during disaster situations.

- Forms emergency response teams (evacuation, shelter, medical treatment, search and rescue, etc.) that includes trained professionals and volunteers to accomplish necessary actions during response operations. Team members may include animal care and control staff, Humane Society staff, veterinarians, veterinary technicians, livestock inspectors, game wardens, farmers, kennel owners, volunteers from animal protection organizations, etc.

All Tasked Organizations

("All tasked organizations" includes those identified above, and all other government or private sector organizations that have been assigned tasking in the EOP to perform response functions.)

- Maintain current internal personnel notification rosters and SOPs to perform assigned tasks.
- Negotiate, coordinate, and prepare mutual aid agreements, as appropriate.
- Analyze need and determine specific communications resource requirements.
- Work with EOC communications coordinator to ensure equipment and procedures are compatible.
- Identify potential sources of additional equipment and supplies.
- Provide for continuity of operations by taking action to:
  - Ensure that lines of succession for key management positions are established to ensure continuous leadership and authority for emergency actions and decisions in emergency conditions.

- Protect records, facilities, and organizational equipment deemed essential for sustaining government functions and conducting emergency operations.

- Ensure, if practical, that alternate operating locations are available should the primary location suffer damage, become inaccessible, or require evacuation. Alternate operating locations provide a means to continue organizational functions during emergency conditions.

- Protect emergency response staff. This includes actions to:

  – Obtain, as appropriate, all necessary protective respiratory devices and clothing, detection and decontamination equipment, and antidotes for personnel assigned to perform tasks during response operations.

  – Ensure assigned personnel are trained on the use of protective gear, detection and decontamination devices, and antidotes.

  – Provide security at facilities.

  – Rotate staff or schedule time off to prevent burnout.

  – Make stress counseling available.

- Ensure the functioning of communications and other essential equipment. This includes actions to:

  – Test, maintain, and repair communications and warning equipment.

  – Stockpile supplies and repair equipment.

Administration and Logistics This section covers general support requirements and the availability of services and support for all types of emergencies, as well as general policies for

managing resources. Mutual aid agreements should be referenced; authorities for and policy on augmenting staff by reassignment of public employees and soliciting volunteers, along with relevant liability provisions, should be addressed. The section should provide the jurisdiction's general policies on keeping financial records, reporting, tracking resource needs, tracking the source and use of resources, acquiring ownership of resources, and compensating the owners of private property used by the jurisdiction.

Plan Development and Maintenance

The overall approach to planning, including the assignment of planning responsibilities, should be discussed in the Basic Plan. Statements should focus on the planning process, participants in that process, and how development and revision of different "levels" of the EOP (Basic Plan, annexes, appendices, and SOPs) are to be coordinated. This coordination task should be assigned to the appropriate person. Provision should also be made for a regular cycle of testing, reviewing, and updating the EOP.

Authorities and References

The Basic Plan should indicate the legal basis for emergency operations and activities. Laws, statutes, ordinances, executive orders, regulations, and formal agreements relevant to emergencies should be listed. The legal basis should include predelegation of emergency authorities, i.e., enabling measures sufficient to ensure that specific emergency-related authorities can be exercised by the elected or appointed leadership or their designated successors. It is important to specify the extent and limits of the emergency authorities granted to the "CEO," the circumstances under which these authorities become effective, and when they would be terminated.

Citing reference materials--including related plans of other levels of government--can be valuable for indicating what has influenced the writing of the EOP. References also help reduce the size of an EOP by directing the user to the full text of procedures, data analyses, and other pertinent information.

Chapter 5
Functional Annex Content

Content

Annexes are the parts of the EOP that begin to provide specific information and direction. Annexes should focus on operations: what the function is and who is responsible for carrying it out. While the Basic Plan provides information relevant to the EOP as a whole, annexes should emphasize responsibilities, tasks, and operational actions that pertain to the function being covered. Annexes should cover, in general terms, the activities to be performed by anyone with a responsibility under the function. An annex should identify actions that not only ensure effective response but also aid in preparing for emergencies and disasters.

Annexes should clearly define and describe the policies, processes, roles, and responsibilities inherent in the various functions before, during, and after any emergency period. To ensure adequate planning for all appropriate contingencies, it may be necessary to spend time projecting the consequences of various emergencies. This should not be restricted to those hazards found to be most threatening during the hazard analysis. For example, airplane crashes, while infrequent, can occur almost anywhere with little or no warning. The term "generic" has been used to describe these functional annexes that are generally applicable to all hazards. The generic annexes are critically important parts of the plan, since they must enable the jurisdiction to cope with any unforeseen emergency.

In general, the organization of the annexes parallels that of the Basic Plan. Specific sections can be developed to expand upon--but not to repeat--information contained in the Basic Plan.

Functions To Include as Annexes

One of the more important things to be done early in the planning process is to select the functions that will be the subjects of separate annexes. These choices are influenced by such factors as the organizational structures of the State and local governments, the capabilities of the jurisdiction's emergency services

agencies, and the established policy or intentions with respect to the concept of operations. No single listing of functional annexes, therefore, can be prescribed for all jurisdictions.

The following list of functional annexes addresses core functions that warrant attention and may require that specific actions be taken during emergency response operations:

- Direction and Control
- Communications
- Warning
- Emergency Public Information
- Evacuation
- Mass Care
- Health and Medical Services
- Resource Management

The fact that several functions are not included in the list does not mean that they are regarded as less important than the ones that are included. Each jurisdiction's planning team should assess its own need for functional annexes. Additional or different functional annexes should be prepared at the discretion of the planning team. Typical candidate annexes include: damage assessment, search and rescue, emergency services, aviation operations, and radiological protection, among others. The primary concern is that all important activities be covered properly in the plan. The location or categorization of these activities is of secondary importance, though a State should strive for consistency among its jurisdictions to facilitate coordination.

Description of Core Functions

The following attachments provide a brief description of each of the eight functional annexes listed above. They also outline the types of operational

activity on which each annex should focus and, for consistency, follow the same general format as recommended for the Basic Plan. **These functions are not prescribed, and the attachments are not sample annexes.**

Attachment A
Direction and Control

Introduction

Direction and control is a critical emergency management function. During the applicable phases (pre-, trans-, and post-) of the emergency response effort, it allows the jurisdiction to:

- Analyze the emergency situation and decide how to respond quickly, appropriately, and effectively.
- Direct and coordinate the efforts of the jurisdiction's various response forces.
- Coordinate with the response efforts of other jurisdictions.
- Use available resources efficiently and effectively.

The manner in which the situation is managed will determine the effectiveness of the overall operation. Field forces (e.g., fire, law enforcement, public works, medical, etc.) can and usually do perform admirably in emergency situations. Where problems often arise is in the overall management of the operation: the merging of varying disciplines, organizations, and agencies not accustomed to working together on a day-to-day basis. Some jurisdictions may choose to address emergency services' (fire, law enforcement, public works, etc.) responsibilities for managing the response to emergency and disaster situations in separate annexes. Direction and control as presented here addresses **all** of the activities associated with managing the response and incorporates the organizational tasking for these emergency services into a single functional annex. The focus is on the critical **operations** the jurisdiction's emergency response organization should perform in response to an emergency.

Direction and control functions may well be long term in nature, changing significantly as the situation moves from response to recovery. This function may be initiated immediately upon the onset of an event, such as when an

earthquake or tornado occurs, or develop gradually as the situation deteriorates, such as when a hurricane or widespread flood occurs. Composition of the staff assigned to the direction and control function may change significantly, as the situation progresses through the various stages of an emergency, into the recovery phase. Regardless of the phase or phases, direction and control is a vital function that must be performed when a jurisdiction responds to any emergency situation.

Developing a Direction and Control Annex

Suggested content to be addressed in a direction and control annex includes the following items.

Purpose

This section provides overview information on the means the jurisdiction will use to direct and control those activities of government that are essential to saving lives, protecting property, and restoring government services during and following emergency situations.

Situation and Assumptions

This section describes the environment that would trigger notification/activation of response personnel. It also describes the assumptions that are applicable to the emergency response organization. It may address capability limitations, resource shortfall, use of personnel or resources from outside of the jurisdiction (mutual aid) to augment the jurisdiction's response organization, or other things that directly impact on the ability of the jurisdiction to respond to emergency situations. A fundamental assumption is that the EOC will be operational around the clock.

Concept of Operations

This section describes the direction and control relationships of tasked organizations. It describes:

- The command structure, specifying who will be in charge during emergency response operations.
- The authorities of, and limitations on, key response personnel such as an IC.

- How emergency response organizations will be notified when it is necessary to respond.

- The means that will be used to obtain, analyze, and disseminate information (for decision-making, requesting assistance, reporting, etc.).

- The relationship between the EOC and the Incident Command Post (ICP), when used.

- The provisions made to coordinate and communicate among all the jurisdictions and agencies (to include all Federal response agencies) that may be involved in the emergency response.

Direction and Control Types

The emergency response command structure should be established before an emergency occurs. Once the response begins, there should be no confusion about who is in charge and who reports to whom. Agreeing on the command structure beforehand helps to ensure that all people involved understand their responsibilities and are ready to implement them when an emergency occurs.

Normally, jurisdictions use a centralized direction and control system, an on-scene control system, or a combination of the two.

- *Centralized*. This is the use of the EOC as a centralized management center to facilitate policy making, coordination, and overall direction of responding forces in large-scale emergency situations. The "CEO" of the jurisdiction or the appropriate designee directs all response and recovery activities from the EOC. This method is used by many jurisdictions and is very useful in situations where the jurisdiction has received warning that, within a given time period (e.g., 72 hours), it may experience the effects of a specific threat (e.g., hurricane, riverine flood, etc.). In such situations there are a number of operational actions and measures that must be taken **before** the consequences of the disaster directly impact on the jurisdiction or an incident site is established. These include issuance of emergency information to the public, suspension or curtailment of government and public services (health,

welfare, public safety, judicial, etc.; school and business closure; cancellation of public events, etc.), evacuation actions, mass care activities (to include set up and staffing of shelters to receive, feed, and care for evacuees). This method is also useful in situations where the jurisdiction is struck by a large-scale disaster (e.g., earthquake) that severely impacts the entire jurisdiction with little or no warning. In such situations, centralized direction of response organizations provides the "CEO" an opportunity to:

- Get a clear picture of the scope of the situation throughout the jurisdiction based on information received in the EOC.

- Work closely with the appropriate representatives from the emergency services organizations (fire, police, public works, health and medical) and other supporting agencies so that response actions and activities can be prioritized based on the overall situation in the jurisdiction.

- Redirect or adjust response actions and use of resources to meet the needs of disaster victims and protect property as the situation warrants.

➢ *On-Scene Control System*. While central control of the emergency response is critically important, the actions that actually minimize the impacts of the emergency event and save lives are performed by responders in the field. Accordingly, an on-scene control system may be used instead of a centralized system. The on-scene control system vests the responsibility for the direction and control of all response actions with an individual that has responded to the scene of an emergency. This "Incident Commander" or IC has authority to coordinate the use of resources and personnel at the scene of an emergency. In some communities, the highest ranking person from the jurisdiction on the scene, regardless of his or her agency, is responsible for incident command. Under this arrangement, a fire department official may direct fire, police, and personnel from the jurisdiction's other departments. Incident command responsibility may change as higher

level personnel arrive on the scene. In other communities, the individual designated to serve as IC may depend on the type of event (i.e., the IC will be from an agency responsible for that kind of event), management fiat, or statute.

Coordination is one of the key goals of planning for the field command structure. The response may involve personnel from several of the jurisdiction's agencies, employees from other nearby jurisdictions, personnel from other levels of government, as well as volunteers. The mechanisms that will be used to coordinate the efforts of all of these different types of responders should be established before the emergency occurs.

Federal HAZMAT regulations and a growing number of State laws mandate the use of an Incident Command System (ICS). ICS is designed around sound business practices that provide a common framework for emergency response. ICS places a high degree of importance on responder safety. The ICS system provides a standardized means to command, control, and coordinate the use of resources and personnel at the **scene** of an emergency. Concepts and principles for ICS include: common terminology, modular organization, integrated communications, unified command structure, consolidated action plan, manageable span of control, designated incident facilities, and comprehensive resource management. ICS concentrates direction and control actions on the **field operations** of the emergency services organizations that have responded to the scene of an emergency. ICS uses a top-down direction and control structure that includes five functions: Command, Operations, Planning, Logistics, and Finance/Administration.

- *Incident Command*. ICS is "scene specific." The function of the IC is to provide overall management at the incident site, including public safety and public information actions. The IC directs, controls, and orders resources, including people and equipment. (When more than one scene is involved, the ICs coordinate activities with the EOC.) The IC will develop a

management structure based on the needs of the incident as articulated in the incident action plan. A small, simple incident will have a small management structure. As incidents grow in size and complexity, the management structure grows accordingly.

- *Operations*. The operations function is coordinated by the Operations Section Chief who reports to the IC. Operations is responsible for the tactical actions at the incident site. All tactical actions are performed in accordance with the Incident Action Plan.
- *Planning*. The planning function is coordinated by the Planning Section Chief who reports directly to the IC. The Planning function is responsible for the collection, evaluation, documentation, dissemination, and use of information about the incident, as well as the status of resources used or needed at the scene. The Planning Section is also responsible for preparation of the Incident Action Plan. For small incidents of short duration this plan may be oral or written. Written action plans should be used: when resources from multiple agencies are being used, when several jurisdictions are involved, or when the incident will require changes in shifts of personnel and/or equipment.
- *Logistics*. The logistics function is coordinated by the Logistics Chief who reports to the IC. The logistics function is responsible for providing facilities, services, personnel, equipment, and materials for the incident.

- *Finance/Administration*. The finance/administration function is coordinated by the Finance Section Chief who reports to the IC. This function is responsible for the tracking of all incident costs, evaluating the financial considerations of the incident, and for any administrative duties not handled by the other functions.

- *Command Staff and the Command Post*. During response operations the IC and staff are located in the ICP. The IC's staff may include:

- A Safety Officer who is responsible for assessing the hazards response personnel may be exposed to and developing measures to ensure personnel safety.

- An Information Officer who is responsible for developing accurate and complete information applicable to the incident, including cause, size, current situation, resources committed, and other matters of general interest. This person also serves as the point of contact for the media and other governmental agencies which desire information directly from the incident scene.

- A Liaison Officer who is responsible for serving as a point of contact with organizations that are supporting the response effort, but not part of the command structure located at the incident scene.

From the ICP the Incident Commander directs all operations. The ICP can take various forms from a specially designed vehicle to an identified emergency response vehicle and is located as close to the scene as practical.

A detailed description of the Incident Command System can be found in the National Fire Academy's NFA-ICS-SM, The Incident Command System*, August 1, 1989 and the Emergency Management Institute's SM 307.1,* Overview of the Incident Command System*, April 1992.*

➢ *Transition*. It is vital to understand that only one person can be "in charge" during response and recovery operations. Sometimes it is appropriate for an IC to be that person; at other times the critical decisions must be made away from the site or before a defined incident site or sites are established, at the EOC. In the two situations given below, direction and control may **transition** from the scene(s) to the EOC or from the EOC to the scene(s). A direction and control annex should explain the direction and control system to be used. It should

clarify the relationship between the centralized command authority and the IC when both ICS and centralized methods of direction and control are used, and anticipate "shifts" in the location (incident site or EOC) and the individual (IC or "CEO") responsible for decision-making.

- *From EOC to Scene*. For some emergencies, the establishment of an emergency scene (or "incident site") may not be possible or appropriate during the initial response phase. Also, several operationally related actions may be required to be completed before an emergency scene is established. Accordingly, many of the initial "response" actions that must be taken should be accomplished in the EOC. As the consequences of the emergency situation become clearer and when a specific emergency scene is defined, command may be transitioned to an IC that has responded to the scene. Once command authority is transitioned to the IC, the EOC would provide support, and would not be responsible for operational decision-making.

- *From Multiple Scenes to the EOC*. As emergencies escalate into large-scale disaster proportions, more than one scene (and thus more than one IC) can become involved. As this happens, it is especially important for field operations to be coordinated through the EOC. Each IC is advised of the expanding scope of operations and is cautioned to be aware of the developing competition for resources. It is in setting priorities for the allocation of scarce resources that the EOC may be said to "control" the response.

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Interjurisdictional Relationships

The concept of operations section should also address the formal arrangements that have been established to request assistance from or to provide assistance to other jurisdictions during emergency situations. The plan should be based on the concept that initial emergency response will, to the maximum extent possible, be by the jurisdiction. Assistance needed will be obtained by executing mutual aid agreements. Assistance to take care of other unmet needs should be referred to the State Emergency Management Agency (SEMA). If

still more assistance is needed beyond State capabilities, SEMA should coordinate requests with the proper Federal agencies, including a request to FEMA for a Presidential declaration of an emergency or major disaster to allow supplemental Federal financial and technical assistance to be provided.

Organization and Assignment of Responsibilities

This section describes the specific direction and control responsibilities that are assigned to the tasked organizations. The following types of tasking may be assigned to the agencies, organization chiefs, and individuals listed in the left margin:

Chief Executive Official ("CEO")

- Activates EOC (full or partial activation), when appropriate.
- Directs tasked organizations to ensure response personnel report to the appropriate locations (EOC, emergency scene, work center, staging area, etc.) in accordance with the organization's SOP.
- When notified, reports to the EOC.
- If appropriate, identifies and establishes contact with IC(s) in the field.
- Provides overall direction of emergency response operations, until an emergency scene is established and an IC assumes this responsibility. (For emergency situations that occur with little or no warning, an IC may already have responded to the scene and taken charge before notification of the "CEO.")
- As appropriate, designates an IC to direct tactical operations at each emergency scene.
- As appropriate, directs implementation of protective actions for public safety.
- If necessary, directs EOC staff to relocate to the alternate EOC to continue operations.
- When appropriate, terminates response operations and release personnel.

Fire Department

- When notified of an emergency situation, sends response teams/personnel, equipment, and vehicles to the emergency site, staging areas, or other location, as appropriate.
- Identifies an IC and establishes an ICP, if appropriate; assigns appropriate personnel to IC staff.
- Performs IC duties at the emergency scene, if appropriate.
- Sends a senior representative to the EOC, when the EOC has been activated during an emergency.
- Notifies the EOC of the situation if the original notification did not come from the EOC.
- Manages fire/rescue resources, directs fire operations, rescues injured people during emergency operations, and determines the need, as appropriate, for evacuation of the immediate area in and around the emergency scene.
- Assists as appropriate in the evacuation of people at risk in the immediate area in and around the emergency scene.
- Alerts all emergency response organizations of the dangers associated with technological hazards and fire during emergency operations.

Police Department

- When notified of an emergency situation, sends response teams/personnel, equipment, and vehicles to the emergency scene or other location, as appropriate.
- Identifies an IC and establishes an ICP if appropriate; assigns appropriate personnel to IC staff.

- Performs IC duties at the emergency scene, if appropriate.
- Notifies the EOC of the situation if the original notification did not come from the EOC.
- Sends a senior representative to the EOC, when the EOC has been activated during an emergency.
- Manages law enforcement resources and directs law enforcement operations. Duties may include:
  - Directing and controlling traffic during emergency operations.
  - Assisting in the evacuation of people at risk in and around the emergency scene.
  - Controlling access to the scene of the emergency or the area that has been evacuated.
  - Providing security in the area affected by the emergency to protect public and private property.
  - Conducting damage assessment activity (through use of aircraft, helicopter, or other police vehicles as appropriate).

EOC Manager (Normally, this job is performed by the jurisdiction's Emergency Manager.)

- Immediately notifies the "CEO" of significant emergency situations that could affect the jurisdiction.
- When directed by the "CEO," or when circumstances dictate, notifies all tasked organizations, informs them of the situation, and directs them to take the action appropriate for the situation (report to EOC, scene of the emergency, stand by, etc.) in accordance with their organization's SOP.

- Activates EOC when directed to do so by the "CEO" or when the situation warrants such action.

- Manages EOC resources and directs EOC operations. Duties may include ensuring the following activities/actions are done:

  - *Information processing*. This task involves the collection, evaluation, display, and dissemination of information about the emergency situation to help support the jurisdiction's response operations. Information collection sources include, but are not limited to: emergency response organizations, media, neighboring jurisdictions, State and Federal governments, volunteer groups, private sector businesses, citizens, etc. Typical tasks associated with information processing may include:

    – Maintaining a significant events log.

    – Message handling.

    – Aggregating damage information from all available sources.

    – Identifying resource needs.

    – Preparing summaries on status of damage.

    – Preparing briefings for senior management officials.

    – Displaying appropriate information in the EOC.

    – Preparing and submitting necessary reports when required (re: situation, critical resource status, etc.), including situation reports to the State EOC, as

appropriate.

- Coordinating logistical support for response personnel and disaster victims.
- When directed by the "CEO," or when conditions warrant such action, relocating staff to the alternate EOC in order to continue response operations.
- When directed by the "CEO," terminating operations and closing the EOC.

Public Works

- When notified of an emergency situation, sends response teams/personnel, equipment, and vehicles to the emergency scene, staging area, or other location, as appropriate.
- Identifies IC and establishes ICP, if appropriate; assigns appropriate personnel to IC staff.
- Performs IC duties at the emergency scene, if appropriate.
- Notifies the EOC of the situation if the original notification did not come from the EOC.
- Sends a senior representative to the EOC, when the EOC has been activated during an emergency.
- Manages public works resources and directs public works operations. Duties may include:
  - Performing debris removal operations.
  - Assisting in urban search and rescue (US&R) efforts.
  - Conducting damage assessment activities (through the use of

vehicles, remote video equipment, etc., as appropriate).

- Providing emergency generators, fuel, lighting, sanitation to support emergency responders at the emergency scene and at the EOC.
- Assisting in the evacuation of people at risk in and around the emergency scene.
- Coordinating with utility companies to restore power to disaster victims.

Emergency Manager

- ➢ Ensures appropriate staff members report to the EOC.
- ➢ Duties may include:
  - Coordinating EOC operations.
  - Staffing the Information Processing Section.
  - Advising/briefing the "CEO" and other key members of the emergency response organization on the emergency situation.
  - Recommending to the "CEO" actions to protect the public from the life threatening consequences associated with the emergency situations.

Public Information Officer (PIO)

- ➢ When notified, reports to EOC or incident scene as appropriate.
- ➢ Handles inquiries and informs the public about disaster damage, restricted areas, actions to protect and care for companion animals, farm animals, and wildlife, and available emergency assistance.
- ➢ Refer to Attachment D for additional operational tasking.

Health and Medical Coordinator

- When notified of an emergency situation, sends a representative to the EOC, if appropriate.
- Coordinates the health and medical treatment activities of all response organizations involved in providing medical assistance to disaster victims.
- Coordinates necessary mortuary services, to include operations of temporary morgues, and identification of victims.
- Collects information and reports damage/status of health and medical facilities and equipment to the EOC.
- Refer to Attachment G for additional operational tasking.

Communications Coordinator

- Serves as a member of the EOC team.
- Ensures the emergency communications section in the EOC is equipped with the appropriate communication gear.
- Refer to Attachment B for additional operational tasking.

Warning Coordinator

(When practical, this individual should be permanently assigned to the EOC).

- Develops and maintains a phone and/or radio frequency list for notifying emergency response personnel, neighboring jurisdictions, and the State EOC of an emergency situation.
- Develops and maintains a phone list or other means for warning special locations, such as schools, hospitals, nursing homes, major industrial sites, institutions, and places of public assembly.
- Identifies public and private service agencies, personnel, equipment, and facilities that could be called upon to augment the jurisdiction's warning

capabilities.

- Refer to Attachment C for additional operational tasking.

Evacuation Coordinator

- When notified of an emergency situation, reports to the EOC, if appropriate.
- Coordinates implementation of evacuation actions with the appropriate tasked organizations.
- Refer to Attachment E for additional operational tasking.

Mass Care Coordinator

- When notified of an emergency situation, reports to the EOC, if appropriate.
- Coordinates implementation of mass care actions for the public with the appropriate tasked organizations.
- Refer to Attachment F for additional operational tasking.

Resource Manager

- When notified of an emergency situation, reports to the EOC, if appropriate.
- Coordinates implementation of resource management activities with the appropriate tasked organizations.
- Refer to Attachment H for additional operational tasking.

Legal Department

When notified of an emergency situation, sends a representative to the EOC, if appropriate.

Education Department

- When notified of an emergency situation, sends a representative to the EOC, if appropriate.

(School Superintendent)	➢ Protects students in school when an emergency situation occurs.
	➢ Evacuates students, if appropriate.
	➢ When directed by appropriate authority, closes school facilities and releases students.
	➢ When directed by appropriate authority, makes schools available for use as mass care facilities.
	➢ Conducts damage assessment of school facilities.
Jurisdiction Comptroller/ Clerk/Book-keeper/Tax Assessor	➢ When notified of an emergency situation, reports to the EOC, if appropriate.
	➢ Provides the Resource Manager and the "CEO" summary briefings on status of financial transactions.
	➢ Maintains records of all financial transactions during response operations.
	➢ Handles all procurement requests initiated by response organizations.
	➢ Establishes a procedure for the jurisdiction to accept "cash donations", where statute permits such action; however, jurisdictions may wish to avoid competing with non-profit organizations' efforts to fund their activities.
	➢ Becomes familiar with the protocol and procedures required by the Stafford Act that are applicable to reimbursing the jurisdiction for eligible expenses associated with Presidentially Declared Disasters.
	➢ Upon termination of the response effort, prepares the appropriate reports that address costs incurred by the jurisdiction during the

emergency situations.

Military Department

Provides personnel and equipment to support direction and control actions at the scene and/or the EOC (at the direction of the Governor).

Volunteer Organizations

When notified of an emergency situation, send a representative to the EOC, if appropriate.

Private Utility Companies

When notified of an emergency situation, send a representative to the EOC, if appropriate.

Animal Care and Control Agency

- When notified of an emergency situation, sends a representative to the EOC, if appropriate.
- Manages public and private sector efforts to meet the animal service needs that arise including:
  - Rescue and capture of animals that have escaped confinement and displaced wildlife.
  - Evacuation.
  - Sheltering.
  - Care of the injured, sick, and stray.
  - Disposal of dead animals.
- Activates emergency response teams (evacuation, shelter, medical treatment, search and rescue, etc.) as needed.
- Prepares a resource list that identifies the agencies/organizations that are responsible for providing the supplies (medical, food, and other necessary items) needed to treat and care for injured and sick animals

during large-scale emergencies and disasters.

- Coordinates response activities with the appropriate representative in the EOC (EOC Manager, Evacuation Coordinator, Mass Care Coordinator, ARC, PIO, Health and Medical Coordinator, Resource Manager, etc.).

- Coordinates the rescue of injured or endangered animals with fish and game departments, wildlife organizations, county cooperative extension offices, veterinarians, etc.

Other Organizations

The organization and assignment of responsibilities section should list any other agencies/departments that have not been included in one of the above categories and itemize the services they provide (e.g., coroner's office, airport authority, marine resources council, U.S. Department of Agriculture, emergency board, etc.).

All Tasked Organizations

- Activate a control center to support and facilitate the organization's response activities (dispatch and manage personnel and resources, maintain a significant events log, report information to the Information Processing Section at the EOC, coordinate with organizational personnel at the emergency scene or EOC, etc.).

- If appropriate, send a representative to the EOC.

- Establish a procedure to identify, and report to the Information Processing Section in the EOC, damage to organizational resources and facilities. Additional tasking may include responsibility for reporting damage to, or status of, critical facilities such as:

  - Emergency service facilities and equipment (fire stations; police stations; custodial facilities, such as jails and juvenile detention centers, hospitals, and other health care facilities; rescue squads; public works facilities, etc.).

- Communications networks (telephones, emergency service radio systems, repeater sites and base stations, television and radio stations, etc.).

- Water supply system/facilities, to include waste water treatment.
- Utilities (power plants, substations, power lines, etc.)

- Transportation networks (roads, bridges, airports, rail terminals, maritime ports).

- Homes, businesses, public facilities, etc.

➢ Where appropriate, ensure that organization staff member(s) tasked to work in the EOC during emergencies have **authority** to commit resources and set policies.

➢ Provide support to the IC, as required.

➢ If appropriate, establish a protocol for interfacing with State/Federal responders.

➢ Coordinate with the PIO and clear press releases with the "CEO" before releasing information to the media for public consumption.

Administration and Logistics

This section addresses the support requirements of the direction and control function.

Administration

This section specifies the records that are required to be maintained, identifies the organizations and agencies that have reporting responsibilities, indicates the frequency for reporting, and describes the types of reports that are to be submitted. Typical tasking may include:

➢ Requirement for agency heads to submit reports to the EOC relating to their agency's expenditures and obligations during emergency conditions.

- Requirement for the local government to submit daily situation, resource consumption, resource shortfall, etc. report(s) to the State EOC.

- Requirement for the emergency management agency to report on the status of the mass care services being provided by volunteer agencies and other nongovernmental organizations.
- The format for submission of reports or requests for assistance should be specified in accordance with the procedures established in an appendix to the jurisdiction's Direction and Control annex.

Logistics This section should address the arrangements that have been made to provide for the support needs (food, water, emergency power, fuel, equipment/supplies replacement, etc.) of the organizations performing direction and control functions:

- *Self-support*. Each tasked organization is expected to provide its own logistical support during the initial phase (the first 24 hours) of response operations. Additional support should be obtained through the EOC, or the IC, as appropriate.

- *Agreements and Understandings*. When local government resources prove to be inadequate during emergency operations, requests should be made to obtain assistance from other local jurisdictions, higher levels of government, and other agencies in accordance with existing or emergency negotiated mutual aid agreements and understandings. Such assistance may take the form of equipment, supplies, personnel, or other available capabilities. All agreements and understandings should be entered into by duly authorized officials and should be formalized in writing.

Plan Development and Maintenance This section should describe who is responsible for coordinating revision of the jurisdiction's Direction and Control Annex, keeping attachments current, and ensuring that SOPs and other necessary implementing documents are developed.

Authorities Authorities and references should be listed as appropriate.

and
References

Attachment B
Communications

Introduction

This function focuses on the communications systems that will be relied upon during emergency situations. The total communications system is discussed in detail and procedures for its use are outlined.

Developing a Communications Annex

Purpose

A communications annex provides information on establishing, using, maintaining, augmenting, and providing backup for all of the types of communications devices needed during emergency response operations.

Situation and Assumptions

The Situation portion of this section identifies some broad considerations that apply to the kinds of emergency conditions that could occur and would require the activation of emergency communications systems to support the jurisdiction's response to the situation.

This section also describes the assumptions that are applicable to the communications system the jurisdiction will use during emergency operations. Typical assumptions may address:

- Recognition of the fact that large-scale emergency operations usually require a communications capability beyond the normal capacities of the equipment of a local government. Therefore, the type required and sources (from the public and private sector) for the additional equipment needed to support response operations should be identified as a fundamental activity associated with developing this annex of the plan.

- Augmentation of local capability by higher levels of government.

- The support provided by the local chapter of RACES. If RACES is not available locally, other public service and private organizations in the

community should be approached. These include such agencies as local industry, taxi and transit companies, citizens band radio groups (e.g., REACT), and local service agencies.

- Designation of specific response organizations to maintain operational control of their own communications systems, while coordinating with the EOC during emergency operations.

- The spontaneous voluntary support of ham radio operators, radio clubs, and private organizations with sophisticated communications equipment.

Concept of Operations

This section should describe the methods used to communicate between the EOC, field forces at a specific incident scene (operating under ICS or another direction and control system), control centers of emergency response organizations, mass care facilities (including shelters and feeding facilities), radio/TV stations, hospitals and ambulance dispatch points, amateur communications networks, adjacent jurisdictions and military installations, State EOC, and Federal and private sector organizations, as appropriate. It should address sourcing for primary and backup systems, the people that will operate the equipment, and detail the communications requirements for emergency response organizations.

Organization and Assignment of Responsibilities

This section describes the specific communications responsibilities that are assigned to the tasked organizations. The following types of tasking should be assigned to the agencies, organization chiefs, and individuals listed in the left margin, below:

Chief Executive Official ("CEO")

Requires the Communications Coordinator to report to the EOC when notified of an emergency situation.

Communications Coordinator

- When notified of an emergency situation reports to the EOC.

- Manages the emergency communications section in the EOC and supervise the personnel (radio, telephone and teletype operators, repair crews, runners, etc.) assigned to it.

- Supports media center communications operations, as needed.

EOC Manager

- Activates communications section in the EOC.
- Implements emergency communications procedures.
- Ensures communications section of the EOC has the capability to sustain operations around the clock.

Communications Section Team Members

- When notified, report to the EOC, staff the communications section, and operate assigned communications equipment.
- Follow established procedures and radio protocol for voice transmissions and message handling.
- Screen and log information when appropriate, and route incoming calls to the appropriate section in the EOC.

Military Department

Provides communications support to include personnel and equipment (as directed by the Governor).

All Tasked Organizations

This includes the organizations (Fire Department, Law Enforcement, Public Works, EOC, Emergency Management Agency, PIO, Health and Medical, etc.) that are directly involved or support emergency response operations. During emergency operations, all departments should:

- Maintain their existing equipment and follow established procedures for communicating with their organization personnel performing field operations. All organizations should keep the EOC informed of their operations at all times and maintain a communications link with the EOC.

- Provide backup communications capabilities for the EOC.
- Provide a backup communications link between the EOC and mass care facilities, as needed, through use of mobile and portable radio units.
- Activate backup or alternate communications systems, as necessary.
- Maintain emergency communications systems as long as necessary.
- When practical, protect equipment against lighting strikes and electromagnetic pulse (EMP) effects.
- Phase down operations, as appropriate.
- Clean, repair, and perform maintenance on all equipment before returning to normal operations or to storage.

Administration and Logistics

This section addresses the support requirements of the communications function.

Administration

- This section addresses the administrative actions associated with satisfying the tasking in this annex. Specific areas to be addressed include:
  - Record and report preparation and retention.
  - Accounting and reimbursement procedures. For example, submit communications expenditure statements to appropriate authorities for reimbursement.
  - Reference to the phone lists and radio frequencies in the SOP that should be followed to notify emergency personnel during emergency situations.

Logistics

This section addresses general support requirements. Specific areas to be addressed include: communications agreements with private organizations,

	mutual aid agreements with neighboring jurisdictions, and provisions to have damaged communications equipment repaired or replaced.
Plan Development and Maintenance	This section should identify who is responsible for coordinating revision of the jurisdiction's Communications Annex, keeping its attachments current, and ensuring that SOPs and other necessary documents are developed.
Authorities and References	Authorities and references should be cited as appropriate.

Attachment C
Warning

Introduction

This function deals with the dissemination to the appropriate government officials and the public timely forecasts of all hazards requiring emergency response actions. This warning information is vital and must be made available in order to ensure that emergency responders and the public take appropriate protective actions to avoid death, injury, and/or damage to property.

Developing a Warning Annex

Purpose

A warning annex describes the warning systems in place in the jurisdiction and the responsibilities and procedures for using them. All components of the system should be identified and the provisions that have been made to implement warning described.

Situation and Assumptions

This section identifies some broad considerations that apply to the kinds of emergency conditions that could require the activation of emergency warning systems. It identifies the warning sites that will be relied upon to alert emergency responders and warn the public.

This section also describes the assumptions that are applicable to the warning systems the jurisdiction may use during emergency operations. Typical are assumptions that:

- Some people who are directly threatened by a hazard may ignore, not hear, or not understand warnings issued by the government.
- Special needs groups such as the hearing-impaired, sight-impaired, physically disabled, or institutionalized (e.g., in mental treatment facilities, jails/prisons/detention facilities, etc.) require special attention to ensure a workable warning system is established.
- Emergency response organizations such as the fire and police may be called upon to help warn the public.

- Where available, EAS stations will be used to help disseminate warning information.

- Radio/TV stations which are not members of the EAS station network will be willing to issue warning announcements.

- Where available, National Oceanic and Atmospheric Administration (NOAA) Weather Radio stations will disseminate watches and warnings issued by the NWS; NOAA tone alert radios are automatically activated when such watches and warnings are issued.

Concept of Operations

This section of the annex provides general information on how warnings will be given within the jurisdiction and in cooperation with other jurisdictions.

General

This section:

- Describes the methods used to notify key government officials and emergency response organizations.

- Describes the methods and warning devices used to disseminate emergency alerts and warnings to the public for the types of hazards that threaten the jurisdiction.

- Identifies types of warning devices (sirens, EAS stations, telephone, tone alert radios, route alerting, etc.) used in the jurisdiction and specifies their location, and the geographic area each device covers.

- Describes the procedures for warning special locations, such as schools, hospitals, nursing homes, recreational facilities, major industrial sites, institutions, and places of public assembly.

- Describes the special procedures required to warn the hearing-impaired and non-English speaking groups.

- Defines the meaning of all warning signals.

Interjurisdictional Relationships

This section:

- Describes the arrangements that have been made (when appropriate) to alert/warn the emergency response organizations and public in neighboring jurisdictions.

- Describes the arrangements that have been made with the emergency management organizations in nearby jurisdictions, industrial complexes, and military facilities (in or near the jurisdiction) that use, produce, store, or transport hazardous materials (HAZMAT) to immediately alert the jurisdiction's EOC when an emergency situation involving HAZMAT occurs.

Organization and Assignment of Responsibilities

This section describes the specific warning responsibilities that are assigned to the tasked organizations. The following types of tasking may be assigned to the agencies, organization chiefs, and individuals listed in the left margin below:

Chief Executive Official ("CEO")

- Specifies who has authority to order activation of warning systems to include EAS.

- Assigns a single organization the responsibility for activation of the various warning systems in the jurisdiction. The organization must be able to initiate the warning systems around-the-clock. In many jurisdictions the EOC has this responsibility.

- Designates public service agencies, personnel, equipment, and facilities that can augment the jurisdiction's warning capabilities.

Warning Coordinator

- When notified of an emergency situation, reports to the EOC. (However, when practical, this individual should be permanently assigned to the EOC.)

- Implements call down rosters to alert emergency responders or provide situation updates.

- Activates public warning systems to include EAS.
- Implements contingency plans to provide warnings if established warning system fails to work.
- Coordinates warning frequencies and procedures with EOCs at higher levels of government and with adjacent communities.
- Works with the PIO to ensure pertinent warning information is provided to the print media for distribution to the public.

EOC Manager

- Activates warning section in the EOC.
- Ensures emergency warning systems are activated when directed to do so.
- Issues cancellation of warning notice or otherwise ensures emergency responders and the public are aware of the fact that the emergency situation is terminated.

All Tasked Organizations

- Upon receipt of a warning message or signal, initiate internal organization notification actions to:
  - Alert employees and volunteer augmentees assigned emergency response duties to the emergency situation.
  - As appropriate to the situation:
    - Suspend or curtail normal business activities.
    - Recall essential off-duty employees.
    - Send non-critical employees home.

- Evacuate the organization's facilities.

- If appropriate, augment the EOC's effort to warn the public through the use of vehicles equipped with public address systems, sirens, employees going door to door, etc.

Administration and Logistics

This section addresses the administrative and general support requirements associated with the warning function.

Administration

Specific administrative areas to be addressed include:

- Reference or attach as an appendix the SOP document that contains the phone lists and radio frequencies of emergency personnel to be notified at the declaration of emergency.

- Attach as an appendix charts or maps that depict the warning system and the area covered by it.

Logistics

Specific logistical support requirements to be addressed include:

- Provisions to test and maintain equipment used to disseminate warning.

- Provisions to get damaged warning equipment repaired or replaced. This equipment includes tone alert radios, sirens, horns, EAS, radio/TV, public address (PA) systems, etc.

- Negotiating an agreement for use of private service agencies, personnel, equipment, and facilities to augment the jurisdiction's warning capabilities.

- If multiple incidents develop, ensure that each IC has adequate warning equipment should it be necessary to notify the public in the vicinity of any desired response.

Plan Development

This section should identify who is responsible for coordinating revision of the jurisdiction’s Warning Annex, keeping its attachments current, and ensuring that

and Maintenance SOPs and other necessary implementing documents are developed.

Authorities and References In addition to the appropriate authorities this section could include references to agreements with media and any plans and procedures developed with them (e.g., EAS plans).

Attachment D
Emergency Public Information

Introduction

EPI's Public The EPI function gives the public accurate, timely, and useful information and instructions throughout the emergency period. The EPI organization initially focuses on the dissemination of information and instructions to the people at risk in the community. However, the EPI organization also must deal with the wider public's interest and desire to help or seek information. People may call to find out about loved ones. They may call to offer help, or simply send donations. They may even urge Federal action. Good, timely information can help prevent overloading a jurisdiction's communications network, its transportation infrastructure, and its staff.

EPI and Warning Some jurisdictions use a single annex for warning and EPI. Warning can be treated as one phase of informing the public, depending on the hazard.

For some hazards (e.g., nuclear power plant accidents), a jurisdiction may have only a few minutes to alert those at risk. Pre-scripted information must go out with the initial warning. EPI also follows up with what is happening, what the response organization is doing, and what else the public should do for its safety. For other hazards (e.g., hurricanes), the media can get the public's attention days in advance. EPI can feed preparedness information into an established

media-public link, and give updates to the media and the public after impact. For still other hazards (e.g., an earthquake), there may be no useful warning. The hazard event itself gets the public's attention, and EPI follows (e.g., after an earthquake, to help prepare the public for aftershocks).

In this Guide's approach, a warning annex focuses on the specialized system and procedures the jurisdiction's government uses to learn of imminent danger and to alert those at risk quickly, before impact. An EPI annex deals with developing messages and accurate information for the public, getting the information out, and monitoring how the information is received throughout the emergency period. The warning system is one means for an EPI organization to get information out, and an EPI annex must address coordination with those responsible for the warning system.

EPI and Media Relations

For its information and instructions to reach area residents, an EPI organization must develop ties to all media in--or around--the jurisdiction. These ties usually carry over from strictly EPI matters (when government has something to say or show and needs the media to relay it) into news coverage (when the media have to relay their stories and need government to say or show something). For most jurisdictions, media relations become a natural extension of the EPI function--all part of a PIO's job.

When media relations are limited to local media, this usually is not a problem. Local media, like the EPI organization, remain after the emergency. They share concern for the community's welfare, and they answer to the community for the service they provide. Local media, being sensitive to community needs, can work with the PIO to focus on strict EPI concerns and attend to news as time and circumstance permit.

Media relations become a challenge when the demand for news coverage overwhelms an EPI organization's ability to perform its basic mission: to provide timely, accurate, and useful information and instructions to area residents. This can happen when national media, and many "local" media representatives from outside the area, converge on the jurisdiction.

This Guide's approach is to treat media relations as a part of the PIO's job (since the EPI organization needs the media to get information out), and to

recommend that an EPI annex treat media convergence as a contingency to be planned for--not as the principal concern of the EPI organization.

Developing an EPI Annex

Purpose

An EPI annex describes the means, organization, and process by which a jurisdiction will provide timely, accurate, and useful information and instructions to area residents throughout an emergency.

Situation and Assumptions

This section should describe the planning environment for the EPI function and show what uncertainties have been treated as fact. Planners might consider the following:

Situation

- *General*. A situation section should list the hazards that face the jurisdiction. It should note which types of emergency (if not all) would require activation of the EPI response organization. If a given hazard requires special planning provisions, the section should mention that hazard-specific appendices have been developed for the annex.

- *Means of Dissemination*. A situation section should give relevant facts about the means available to the jurisdiction for transmitting EPI. Relevant facts include:

  - *Identified Resources*. The section should describe the principal means by which EPI will be disseminated (EAS; television, radio, and cable outlets not participating in EAS; newspapers and specially printed material). A listing of these should be attached to the annex and address hours of operation for radio/TV/cable stations, circulation (morning/ evening, daily/weekly) of newspapers, language covered, and points of contact (day/night/weekend). The section also should describe what back-up means can be used (vehicle-mounted public address systems, door-to-door).

  - *Coverage*. The section should describe the area covered by broadcast stations and give at least a rough idea of audience access to cable and newspapers (e.g., number of subscribers).

- *Vulnerability.* The section should note how the means for disseminating EPI could be harmed by hazards that face the jurisdiction. (The section can reference maps and/or any similar discussion in the jurisdiction's Warning Annex.) Contact *with* the means of dissemination also should be addressed, if the jurisdiction relies only on the telephone system.

- *Dependency*. Along with vulnerability, a local EPI annex should note any dependency on out-of-town media (e.g., printers and newspapers).

➢ *Audience*. A situation section should give relevant facts about the audience for EPI. Relevant facts include:

- *Special Needs Groups*. The section should list the jurisdiction's non-English speaking groups in excess of some planning threshold (e.g., five percent of population) and note the foreign language media that could be used to communicate with these groups. It also should note other factors that affect people's ability to receive, act on, or understand EPI. These might include sight or hearing impairments, being in custodial institutions (e.g., schools, nursing homes, hospitals, etc.), or being unfamiliar with the area and its hazards (as is the case with tourists).

- *Preparedness*. The section may note whether ongoing public preparedness campaigns are conducted and whether printed material is available in telephone books, at key locations, or from community groups to which it has been distributed.

Assumptions

➢ *Media*. Relevant assumptions about the media include:

- *Local Cooperation on EPI.* Local media will cooperate in placing the community's need for EPI ahead of the need for news coverage, at least in the initial warning and response phase

of an emergency. (As appropriate, written agreements for commercial broadcast media to disseminate EPI may be prepared.)

- *External Media Interest*. Some events, or even forecast events, can bring many reporters, photographers, and camera crews to an area; this will create heavy demands on the EPI organization, requiring augmentation. External media will be interested less in details than in spectacle and "human interest" stories of universal appeal and quick impact.

➢ *Audience*. Relevant assumptions about the audience may address:

- *Preparedness*. The section may note what level of preparedness is assumed. Public awareness campaigns will not have been 100 percent effective, especially in jurisdictions with many tourists and transients.

- *Demand for Additional Information*. People will want more information and will call to get it if possible.

Concept of Operations

The concept of operations section provides general information on how EPI is to be disseminated to the public. It describes policies, protocols, and a sequence of activity.

General

This section should address who activates the EPI organization, how the organization is notified, and where personnel should report (e.g., the EOC). It should set forth priorities for EPI activity: production and dissemination of EPI, response to public inquiry, monitoring and rumor control, and media relations. It also should set forth a jurisdiction's policy to have a single release point for EPI (such as a public information center), to focus EPI on specific emergency-related information, and to provide positive and reassuring information when possible.

Phased Activity

➢ *Increased Readiness (e.g., Forecast Event).*

- *Actions*. Following are actions that may be taken with more than a day's notice. The list is not all-inclusive.

  – Coordinate with "CEO," Evacuation Coordinator, Mass Care Coordinator, and Warning Coordinator to determine status of plans and timing of actions.

  – Establish and maintain contact with media. Provide preparedness information and any instructions, as cleared by "CEO."

  – Arrange for accelerated printing of camera-ready EPI material (e.g., evacuation instructions/maps and Family Protection Program leaflets), if needed to supplement/restock existing print material.

  – Ensure distribution of printed material to broadcast media, to preselected locations (e.g., grocery stores), and/or via newspaper.

  – Monitor media.

  – Augment public inquiry and/or media relations staffs, if needed. Set up any additional facilities for EPI operations (e.g., separate telephone bank or media center) with support from the Communications Coordinator.

- *Message Content*. Following is suggested general content for pre-impact messages. These will depend on the amount of time available for action and on the particular hazard. Hazard-specific information and instructions should be appended to the annex.

  – Hazard.

  – Estimated area and time of impact.

- Property protection measures (e.g., sandbagging, taping windows).
- Disaster supply kit for surviving 72 hours.
- Evacuation instructions (departure time, routes, mass care facility locations, etc.), if feasible to evacuate.
- Instructions on how to protect and care for young children, pregnant women, and senior citizens.
- Instructions on how to protect and care for companion and farm animals (location of animal shelters, provisions and requirements--e.g., use of leashes or cages--for transport of companion animals, etc.)
- Other "do's and don't's" if not feasible to evacuate, such as stay indoors, close all doors and windows, etc.
- How (and how often) government will be in touch with the public during the emergency.
- Telephone numbers for specific kinds of inquiry (if staffed).

➢ *Limited Warning Available*.

- *Actions*. Following are EPI actions that may be taken with limited notice. The list is not all-inclusive.
  - Coordinate with “CEO" and Evacuation Coordinator to determine what protective action will be taken, (limited) evacuation or in-place shelter.
  - Complete "stand-by" EPI instructions with particulars of the event. Coordinate with Warning Coordinator to ensure warning system (e.g., EAS, route alerting, door-

to-door canvassing) is activated and ensure EPI is being disseminated.

– Contact media to repeat and update initial warning (especially if not provided through EAS) and provide EPI contact name(s) and telephone number(s).

– Monitor media.

- *Message Content*. Following is suggested general content for pre-impact messages with limited warning available. Again, these will depend on the particular hazard. Hazard-specific information and instructions should be appended to the annex.

  – Hazard; kind of risk posed to people and property.

  – Area at risk and predicted time of impact.

  – Protective action instructions. These may address specific groups (e.g., parents with school children in the area) as well as the general pubic.

  – Reference to any useful information at-hand (e.g., in telephone book).
  – What government is doing or will do.

  – How (and how often) government will be in touch with the public during the emergency.

➢ *After Impact.*

- *Actions*. Following are EPI actions that may be taken after the impact of an emergency. The list is not exhaustive.

  – Establish and maintain contact with media. Provide information and any instructions, as cleared by "CEO" or his/her designee.

- Monitor media reports and telephone inquiries for accuracy and respond as appropriate to correct rumors.

- Augment public inquiry and/or media relations staffs, if needed. Set up any additional facilities for EPI operations (e.g., separate telephone bank or media center) with support from the Communications Coordinator.

- Arrange for printing of camera-ready EPI material (e.g., Family Protection Program leaflets and health and safety instructions), if needed.

- Ensure distribution of printed material to broadcast media, to preselected locations (e.g., grocery stores), to volunteer groups or other response and recovery personnel that may go into residential areas, and/or via newspaper.

- Compile chronology of events.

• *Message Content*.

- Current situation assessment.

- Current government actions.

- Survival instructions (for those affected or still potentially affected).

- How/where to get what help (for those affected).

- Health hazards information.

- How/where to get help for companion and farm

animals.

- Restricted areas (for those not affected).
- Telephone number for inquiries regarding survivors.
- What to do and whom to contact in order to offer help.
- Telephone number for donations offers and inquiries, accompanied by donations policy (send money and make check payable to..., critical needs include X but please don't send Y..., package donations such and such way).
- How and how often government will be in touch with public during the emergency.
- Instructions for evacuees to return home.

Internal Coordination

The concept of operations section should address how the jurisdiction will coordinate EPI in order to "speak with one voice." The section should provide for one PIO and alternate, designated by the "CEO," for dissemination of official EPI and instructions through the media to the public. It should provide for management of EPI out of one location. It should provide for coordination between individual agencies' public affairs officers and the PIO. It also should provide for coordination between public affairs officers dispatched to the scene of event and the central location for EPI (e.g., briefings before the public affairs officer goes to the scene and regular contact thereafter). Coordination must include procedures for verifying and authenticating information, and for obtaining approval to release information.

The concept of operations section also should address how the jurisdiction will deal with media convergence. (This could be by reference to a separate appendix to the annex.) Provision should be made for possible transfer of some duties to the Office of the Chief Executive (in jurisdictions where there is a press secretary, for example), use of a trained local media person to help with out-of-town media (where resources are more limited), or obtaining assistance from

another level of government's public information staff. Provision should be made for establishing a separate media center, if EOC briefing space is inadequate. Provision also should be made for credentialing media representatives and for coordinating with law enforcement to allow media access to the scene (if it is safe to do so). The section should make clear who decides to implement such provisions.

Interjurisdictional Coordination

Local-Local. The concept of operations section should address coordination between city and county, or between local jurisdictions that rely on the same media resources.

Local-State. State law and plans define the framework for local and State coordination on EPI. States and localities should consider how they will coordinate in emergencies with or without a Governor's declaration of emergency. This may include support for media relations.

Local-State-Federal. In disasters that threaten to overwhelm a State's capability to respond and support its local governments, the Federal Government may be asked to deploy to the affected State under the FRP. The FRP calls for maximum coordination of agencies' information releases through a Joint Information Center (JIC) to ensure consistency and accuracy. The JIC is a single location where the media have access to information and the public affairs personnel of various agencies can consult with one another. The resources of the JIC are made available to State, local, and voluntary agencies so that all levels of government may conduct public information activities together. This is the best way to ensure that local, State, and Federal officials are using the same information and are not making inconsistent statements. If a single local-State-Federal JIC is not a viable option, public affairs personnel, decision-makers, and news centers are to be connected by electronic mail, fax, and telephone in a "Joint Information System" (JIS). In a JIS, releases of information should be coordinated to ensure that everyone is using the most recent and accurate data.

Organization and Assignment of Responsibilities

The EPI organization should be depicted in a chart. The organization may be built around distinct areas of responsibility (e.g., information gathering and production, monitoring and rumor control, public inquiries, and media relations). It is not always necessary for each "box" to be filled by a different person; it is necessary to be *able* to staff each "box" to meet increased demands on the EPI organization (e.g., for public inquiries or media relations). Charts can reflect augmentation. See Figure 5-D-1. The following types of tasking may be assigned to the agencies, organization chiefs, and individuals listed in the left margin below:

Chief Executive Official ("CEO")

- Serves as primary spokesperson before media, or delegates function to PIO.
- Gives final approval to release of emergency instructions and information, or delegates function to PIO.
- In cases where Incident Command has been established, provides policy guidance on the transfer of authority to release information from the ICP to the EOC should the incident exceed a predetermined level.
- Designates location for media briefings (e.g., EOC conference room).
- Approves implementation of any special provisions for media convergence.

Public Information Officer (PIO)

- Manages all aspects of EPI on behalf of "CEO."
- Assumes EPI functions delegated by "CEO."
- Ensures timely preparation of EPI materials and their dissemination.
- Ensures that public is able to obtain additional information and provide feedback (e.g., with hotline for public inquiries).
    - May establish center for disaster welfare information, and

cooperate with any Disaster Welfare Information (DWI) services provided by the ARC.

- Coordinates with appropriate officials (Mass Care Coordinator, Health and Medical Coordinator, etc.) to obtain necessary information.

➢ Ensures gathering of necessary information and timely preparation of news releases.

➢ Briefs public affairs officers who go to the incident site.

➢ Schedules news conferences, interviews, and other media access (subject to any special media convergence provisions).

➢ Supervises the media center.

➢ Assigns print and broadcast monitors to review all media reports for accuracy.

➢ Coordinates rumor control activity.

➢ At the request of the Resource Manager, obtains media assistance in disseminating information to potential donors on unmet needs, items that are not needed and should not be donated, cash donations policy, and other donations-related matters.

➢ Maintains a chronological record of disaster events.

Emergency Manager

➢ Advises "CEO" on when to disseminate emergency instructions to the public.

➢ Assists the PIO with news releases and rumor control.

EAS Stations

➢ Store "canned" EPI messages (other than warnings) and disseminate this information at the PIO's request.

- Disseminate information when requested to do so by "CEO" or his/her designee.

Local Media Organizations

- Store/maintain advance emergency packets for release at the PIO's request.
- Verify field reports of emergency's development with PIO.
- Cooperate in public education efforts.

Chief School Official

Disseminates emergency information to school population as appropriate.

Resource Manager

- Provides PIO with unmet needs requests from Donations Team to be solicited from businesses and the public, as well as other donations-related information.

Voluntary Organizations

- Provide support to public inquiry telephone lines, as requested by PIO.
- Provide support in disseminating printed EPI material, as requested by PIO.

All Tasked Organizations

- Provide information as requested by PIO.
- Clear all emergency-related news releases with the jurisdiction's PIO.
- Provide public affairs officers to support EPI activities, as requested by PIO.
- Refer media inquiries to PIO.

Administration and Logistics

The administration and logistics section addresses the administrative and general support requirements for the EPI function.

Administration

The section should address reporting and information flow for the EPI function, or reference the relevant SOPs. Common reports *from* EPI would include press coverage summaries and/or clips, public reaction and concerns (based on telephone inquiries or even post-disaster "town meetings"), and a final chronology of events.

Logistics

- *Staffing*. The section should indicate how a "core" EPI staff is to be augmented to handle a surge in the public's and the media's demands for information.

- *Facilities and Equipment*. The section should describe what facilities are to be used for EPI and where they are located. The basic facility is the EOC and its conference room or media center. Other possible facilities would be a telephone bank and a separate, larger media center. The section should describe how additional facilities will be obtained, and who obtains them. SOPs should be developed for setting up these facilities and referenced here. The section also should describe special equipment needs for EPI facilities and how they will be met.

- *Suppliers/Agreements.* The section should reference agreements with suppliers (e.g., printers). An attachment to the annex should list day and night points of contact for such suppliers, as well as for media outlets.

Plan Development and Maintenance

This section should describe who is responsible for coordinating revision of the jurisdiction's EPI Annex, keeping its attachments current, and ensuring that SOPs and other necessary implementing documents are developed.

Authorities and References

Authorities would include the jurisdiction's emergency management statute or ordinance. References might include 47 CFR , Part 73, Subpart G, Emergency Alert System, as amended; the Local Area or State EAS Plan; and supporting SOPs. FEMA and the ARC have also produced several useful

Family Protection Program brochures, as listed in the bibliography. These could be referenced if used.

Attachment E
Evacuation

Introduction

This function deals with the movement of people to a safe area, from an area believed to be at risk, when emergency situations necessitate such action.

Developing an Evacuation Annex

Purpose

An evacuation annex describes the provisions that have been made to ensure the safe and orderly evacuation of people threatened by the hazards the jurisdiction faces.

Situation and Assumptions

This section identifies the emergency conditions that could occur and that would require evacuation. It identifies the areas potentially subject to evacuation (areas prone to flooding, seismic activity, or wildland fire; areas located near facilities that use, store, produce, or transport hazardous materials; etc.). Any site-specific evacuation plans and maps should be appended to the annex. This section identifies the population groups requiring special assistance during evacuation, e.g., the elderly and persons with disabilities.

This section also addresses the unknowns of the emergency situation that are associated with evacuation. Assumptions made should focus on the probable operational situations under disaster conditions, cover unanticipated contingencies, and establish the parameters within which the **planning** for evacuation will take place. Typical are assumptions that:

- The annex focuses on hazards that provide sufficient warning time to implement a planned evacuation for people identified as being at risk in the jurisdiction.
- Spontaneous evacuation will occur when there is sufficient warning of the threat. Between 5 and 20 percent of the people at risk will evacuate before being directed to do so.
- Some people will refuse to evacuate, regardless of the threat.

- Some owners of companion animals will refuse to evacuate unless arrangements have been made to care for their animals.

- Roughly 20 percent of the population at risk will require shelter in a mass care facility. (This figure should be adjusted based on any behavioral studies conducted in the jurisdiction.) Many evacuees will seek shelter with relatives, friends, or motels rather than use government-provided mass care facilities.

- Where available, military support (as approved by the Governor) will be available to support evacuation efforts.

- For some seasonal hazards, such as a hurricane, standard designated evacuation routes will be used to evacuate people.

- Evacuation of people at risk for emergency situations that occur with little or no warning will be implemented on an *ad hoc* basis. The individual responsible for implementing it should be the IC at the scene of the emergency, with support arranged through the EOC as necessary. Evacuation instructions should be based on known or assumed health risks associated with the hazard.

Concept of Operations

There are several factors which must be considered when planning for an evacuation. Among these are the characteristics of the hazard or threat itself. The magnitude, intensity, speed of onset, duration, and impact on the local community, are all significant elements to be considered. They will determine the number of people to be evacuated, time available in which to effect the evacuation, and the time and distance of travel necessary to insure safety. Evacuees are moved from their homes to a designated area within the jurisdiction (or a neighboring jurisdiction in some cases) not impacted by the hazard that caused the evacuation.

General

The provisions that have been made for carrying out a complete or partial evacuation of the people from the jurisdiction are addressed. The areas likely to be evacuated are defined. The travel routes are specified and the destination of evacuees is identified. The means that will be used to transport evacuees are described. The approach for controlling the flow of evacuees from the

threatened area is outlined and the arrangements that have been made to return evacuees to their homes explained. This section:

- Identifies the scope of authority granted to an IC to act under standing orders from the "CEO."

- Describes the provisions that have been made for evacuating special needs populations. Such populations include: children in school, children in day care centers, nursing home residents (long-term); the handicapped (hearing-impaired, sight-impaired, mentally impaired, and mobility-impaired); non-English speaking people; institutionalized individuals (in hospitals, mental health facilities, nursing homes (short-term)); incarcerated residents (in jails, juvenile facilities, drug treatment centers, etc.); transient populations (street people, motel and hotel guests, seasonal workers); and people without transportation.

- Describes the means the government will use to keep evacuees and the general public informed on evacuation activities and the specific actions they should take.

- Describes the evacuation options and the evacuation routes that have been developed to protect and move the people away from the different types of hazards the jurisdiction faces.

- Describes the modes of transportation that will be used to move evacuees.

- Identifies assembly areas for picking up people that do not have their own transportation.

- Outlines or references the document that details the evacuation movement control procedures.

- Describes the provisions that have been made to control access to the evacuated area.

- Describes the provisions that have been made to provide security for the protection of property in the area that has been evacuated.

- Describes the provisions that have been made for the return of people to their homes.

Interjurisdictional Relationships

This section describes the formal arrangements that have been made with the emergency management organization(s) in neighboring jurisdictions to facilitate the movement of evacuees from the hazard area and, if appropriate, provide them shelter and other services in a mass care facility.

Organization and Assignment of Responsibilities

This section describes the evacuation responsibilities that are assigned to tasked organizations. EOPs should include the types of tasking assigned to the agency/organizational chiefs listed in the left margin:

Chief Executive Official ("CEO")

- Requires the evacuation coordinator to report to the EOC when notified of an emergency situation.

- Issues a statement on the jurisdiction's policy on people that do not comply with evacuation instructions. The statement addresses the consequences for not evacuating and the services (food, medical, utilities, sanitation, etc.) that will be discontinued or interrupted in the evacuation area.

- Issues evacuation instructions or an evacuation order when appropriate.

Evacuation Coordinator

Upon arrival at the EOC:

- Reviews known information about the emergency situation and make recommendations to the Emergency Manager on the appropriate evacuation options to implement.

- Determines any scene(s) where IC(s) may have already evacuated. If so, identifies perimeters and verify extent of abandonment.

- Identifies assembly areas for picking up people that do not have their own transportation.
- Identifies evacuation routes.
  - Estimates the traffic capacity of each designated evacuation route.
  - Selects evacuation routes from risk area to designated mass care facilities.
  - Examines access to evacuation routes from each part of the risk area.
  - Prepares the evacuation movement control plan.
  - Coordinates with law enforcement officials.
- Assists, as appropriate, the animal care and control agency's efforts to evacuate animals at risk during catastrophic emergency situations.

Emergency Manager

- Makes recommendations to the "CEO" on the appropriate evacuation option to implement.
- Ensures that functional coordinators are clear on location of mass care facilities outside of the risk area that will be used to house evacuees.
- Coordinates with and assist the animal care and control agency staff to identify facilities that may be used to house evacuated animals.

Law Enforcement

- Provides traffic control during evacuation operations. Operational considerations include:
  - Route assignment departure scheduling.

- Road capacity expansion.
- Entry control for outbound routes.
- Perimeter control on inbound routes.
- Traffic flow, including dealing with breakdowns.
- Establishment of rest areas.

➢ Secures, protects, and houses those prisoners that must be evacuated.

➢ Assists in the evacuation of the risk area, as necessary.

➢ Protects property in the evacuated area.

➢ Limits access to the evacuated area.

➢ Coordinates with the Evacuation Coordinator.

Public Works

Verifies the structural safety of routes (roads, bridges, railways, waterways, airstrips, etc.) that will be used to evacuate people.

Public Information Officer (PIO)

➢ Disseminates the following types of instructional materials and information to evacuees:

- Identification of the specific area(s) to be evacuated.
- List of items that evacuees should take with them (such as food, water, medicines, portable radio, fresh batteries, clothing, sleeping bags).
- Departure times.
- Pick-up points for people requiring transportation assistance.

- Evacuation routes. (Give easy to understand instructions using major roads, streets, highways, rivers, etc.)
- Location of mass care facilities outside of the evacuation area.

➢ Keeps evacuees and the general public informed on evacuation activities and the specific actions they should take.

➢ Disseminates information on appropriate actions to protect and care for companion and farm animals that are to be evacuated or left behind.

Mass Care Coordinator

Activates staff and opens mass care facilities outside the evacuation area when directed to do so by appropriate authority.

Health and Medical Coordinator

➢ Ensures patient population is reduced in hospitals, nursing homes, and other health care facilities, if evacuation becomes necessary.

➢ Ensures transport and medical care are provided for the patients being evacuated.

➢ Ensures continued medical care is provided for patients who cannot be moved when hospitals, nursing homes, and other health care facilities are evacuated.

Education Department/ School Superintendent

➢ Evacuates students from school buildings when the situation warrants or when directed to do so by appropriate authority.

➢ Closes school facilities and releases students from school when directed to do so by appropriate authority.

➢ Coordinates, where appropriate, the use of school buses/drivers to support the overall evacuation effort.

Animal Care and Control Agency

- Based on information from the Evacuation Coordinator on the high-hazard areas in the jurisdiction, makes an initial estimate of the numbers and types of animals that may need to be evacuated.
- Coordinates with the Evacuation Coordinator to arrange travel routes and schedules the timing for evacuation of farm animals, animals in kennels, veterinary hospitals, zoos, pet stores, animal shelters, university laboratories, etc. and wildlife (as appropriate) from the risk area.
- As appropriate, mobilizes transportation vehicles (stock trailers, trucks equipped with animal cages, etc.) that may be used to evacuate the animals.
- Implements evacuation by sending evacuation team(s) to load and transport the animals being evacuated.
- As appropriate, dispatches search and rescue teams to look for animals left behind by their owners, stray animals, and others needing transport to a safe location.

All Tasked Organizations

- Make provisions to protect and secure facilities and equipment not taken out of the area to be evacuated.
- Identify and make provisions to relocate the organizational equipment and supplies that will be moved from the evacuation area.

Administration and Logistics

This section addresses the administrative and general support requirements for the evacuation function.

Administration

Specific areas to be addressed include:

- Records and reports associated with tracking the status (evacuation notices, number evacuated, number of evacuees in mass care facilities, etc.) of evacuation events.
- Attaching as an appendix maps that depict the routes that have been

designated as primary and alternate evacuation routes.

Logistics

Specific areas to be addressed include:

- The provisions that have been made to move from the area being evacuated those essential supplies and equipment items that are needed to sustain operations and to meet the needs of evacuees. Typical items include:
  - Food.
  - Water and water trailers.
  - Medical supplies.
  - Food, carriers, leashes, etc. for animals.
  - Sanitation devices.
  - Portable generators and lighting devices.
  - Gas and diesel fuel.
  - Public works equipment and vehicles such as bulldozers, graders, dump trucks, snowplows, etc.,
  - Police and fire fighting vehicles, etc.
- Mutual aid agreements with neighboring jurisdictions that address the support (law enforcement personnel, vehicles to transport evacuees, mass care staff and facilities to shelter evacuees, etc.) to be provided by the jurisdictions to facilitate evacuation operations.

Plan Development and

This section should identify who is responsible for coordinating revision of the jurisdiction's Evacuation Annex, keeping its attachments current, and ensuring that SOPs and other necessary implementing documents are developed.

Maintenance Authorities and References	Authorities and references should be cited as appropriate.

Attachment F
Mass Care

Introduction

This function deals with the actions that are taken to protect evacuees and other disaster victims from the effects of the disaster. These actions include providing temporary shelter, food, medical care, clothing, and other essential life support needs to those people that have been displaced from their homes because of a disaster or disaster threat situation.

Developing a Mass Care Annex

Purpose

A mass care annex describes the provisions that have been made to ensure disaster victims receive the appropriate services when at a mass care facility. Local government is responsible for the development of a capability to provide mass care services for its citizens in the event of an emergency and should be prepared, if necessary, to receive and care for people evacuated from the area directly impacted by a disaster. The requirements for services vary depending upon the nature and phase of the emergency. Local officials must be ready to provide different types of support in response to the unique nature of the situation. Prior to onset, facilities (e.g., schools, churches, nonessential government buildings, etc.) are needed to register, shelter, feed, protect, and provide for other human needs of an evacuated population. During the emergency phase, these facilities may be used to provide evacuees physical protection from the effects (e.g., water and wind associated with storms, earthquake aftershocks, radiological contamination from a nuclear power plant accident, etc.) of a disaster. During the post-disaster period these facilities may be used on a long-term basis to feed, care for, and provide temporary housing to the disaster victims whose homes have been severely damaged or destroyed or cannot return to their homes because of damage to or debris on roads and bridges. Other long-term post-disaster mass care options may include: kitchens to feed people; water supply stations; first aid stations; temporary housing in rental units, tents, hotels/motels, and mobile homes; hygiene facilities (portable toilets and showers); mail service, etc.

Situation and Assumptions

This section should identify the emergency conditions that could occur which would require the activation of mass care operations. These considerations, in turn, provide input for decisions about types and locations of mass care facilities to be supported. For example, if the community is vulnerable to floods, hurricanes, tornadoes, and nuclear power plant accidents, the locations of the mass care facilities should be outside of the floodplain and have sufficient structural integrity to provide people physical protection from the effects of high wind, earthquake aftershocks, and radiological contamination.

This section also should address unknowns of the emergency situation that are associated with mass care. Such assumptions focus on the probable operational situations under disaster conditions, cover unanticipated contingencies, and establish the parameters within which the planning for mass care will take place. Typical assumptions are that:

- The ultimate responsibility for mass care services for citizens rests with local government.
- A public, nonprofit, or private-sector organization will manage and staff the jurisdiction's mass care facilities.
- For a large-scale disaster, a DWI system will be implemented.
- In most jurisdictions, the ARC will serve as the principal organization responsible for operating mass care facilities during disasters.
- If ARC services are not available locally, other public or nonprofit organizations in the community will assume responsibility for operating mass care facilities. These organizations may include such agencies as the Salvation Army, churches, schools, or local service agencies.
- Sufficient warning time will be available to ensure that mass care facilities are opened in time to provide shelter and other services for the people that have been evacuated.
- Approximately 80 percent of evacuees will seek shelter with friends or relatives rather than go to an established mass care facility. (The actual figure should be based on behavioral studies and past experience of the

jurisdiction.)

- Where available, military support (as approved by the Governor) will be available to support mass care operations.

- The jurisdiction may have to enter into an agreement with adjacent jurisdictions to arrange for mass care services for evacuees that cannot be taken care of in the home jurisdiction or to provide similar services to other jurisdictions when their evacuees cannot be cared for in their home jurisdiction.

Concept of Operations

This section specifies the conditions under which mass care services will be provided and describes the methods that will be used to activate and manage mass care facilities. There are several factors which must be considered when planning for a mass care operation. Among these are the characteristics of the hazard or threat itself. The magnitude, intensity, spread of onset, duration, and impact on the local community, are all significant elements to be considered. They will determine the number of people that will need to receive mass care services.

General

The provisions that have been made for setting up, supplying, and operating mass care facilities are addressed. The areas of the jurisdiction that are likely to require evacuation should be identified. The arrangements that have been made to direct evacuees to specific facilities also should be addressed. This section:

- Describes the working relationship the jurisdiction has with the ARC or other nonprofit, public service, or private-sector organizations that have responsibility for managing mass care facilities.

- Identifies the location of all mass care facilities that have been designated to provide shelter and/or other services to evacuees.

- Describes the means the government will use to keep evacuees and the general public informed on mass care activities.

- Describes the arrangement for operation of each mass care facility. These include:

- Opening of the facility.
- Staff composition and management structure.
- Provisions for registering and tracking location of each evacuee (to be able to respond to inquiries from the evacuee's family, track health concerns, etc.)
- Specific services provided to evacuees (shelter, feeding, medical care, etc.).
- Communications procedures.
- Reporting requirements.
- Termination of services and closure of the facility.

➢ Describes how the mass care function will support efforts to respond to inquires from family members of disaster victims.

- The annex should establish an information flow from mass care facilities to the Mass Care Coordinator and from the Mass Care Coordinator to the jurisdiction's public inquiry response effort. In this Guide's approach, that public inquiry response effort would fall to the EPI organization, which would collect information from the Mass Care Coordinator and other sources.
- Under the FRP, the ARC and Emergency Support Function 6 (ESF-6) may operate a DWI system. The DWI system uses information from shelter lists, casualty lists, hospitals, the State EOC, and other sources to aid in family reunification and in responding to inquiries from immediate family members from outside the affected area about the status of their loved ones. The annex may describe protocols for how a local jurisdiction, in concert with State officials, will interface with the ESF-6

DWI system.

- Identifies the population groups requiring special assistance when being sheltered in a mass care facility, i.e., the elderly and persons with disabilities.

- Describes the provisions that have been made for providing mass care services for special needs populations. Such populations include: children in school, children in day care centers, nursing home residents (long term); the handicapped (hearing-impaired, sight-impaired, mentally impaired, and mobility-impaired); non-English speaking people; institutionalized individuals (in hospitals, mental health facilities, nursing homes (short term)); incarcerated residents (in jails, juvenile facilities, drug treatment centers, etc.); transient population (street people, motel and hotel guests, seasonal workers); and people without transportation.

- Describes the provisions that have been made to feed, shelter, and provide medical treatment for animals during large-scale disasters.

Interjurisdictional Relationships

This section describes the formal arrangements that have been made with the emergency management organization(s) in neighboring jurisdictions to ensure that all evacuees have access to the services available in a mass care facility.

Organization and Assignment of Responsibilities

This section describes the mass care responsibilities that are assigned to tasked organizations. EOPs should include the following types of tasking assigned for the agency/organization chiefs listed in the left margin below:

Chief Executive Official ("CEO")

- Requires the Mass Care Coordinator to report to the EOC when notified of an emergency condition.
- Issues an order to open mass care facilities, when appropriate.

Mass Care Coordinator

Upon arrival at the EOC:

- Assesses the situation and make recommendations to the Emergency Manager on the number and locations of mass care facilities to be opened.

- Reviews listing of available mass care facilities.

- Notifies persons and organizations identified in the mass care resource list about possible need for services and facilities.

- Selects mass care facilities for activation in accordance with:

  - Hazard/vulnerability analysis considerations.

  - Locations in relation to evacuation routes.

  - Services available in facilities.

  - Input from the Emergency Manager.

- When directed, coordinates the necessary actions to ensure mass care facilities are opened and staffed, as needed.

- Notifies mass care facility managers to do one of the following, when appropriate:

  - Stand by for further instruction on the specific actions to take and the estimated timing for opening mass care facilities.

  - Take the necessary action to open the facility they are responsible for managing.

- Coordinates with Resource Manager for supplies needed (including bulk emergency relief items) and ensures each mass care facility receives its supplies.

- Coordinates with EOC staff to ensure that communications are established, routes to the mass care facilities are clearly marked, and

appropriate traffic control systems are established.

- Ensures each mass care facility has a highly visible identity marker and sign that identifies its location.

- Provides each Mass Care Facility Manager a listing of the location of the animal shelters that have been opened to house and care for companion animals.

- Assists, as appropriate, the animal care and control agency's efforts to feed, shelter, and provide medical treatment for animals during catastrophic emergencies.
- Ensures appropriate mass care information (number of occupants, meals served, etc.) is made available to information processing section in the EOC.

- Collects information from Mass Care Facility Managers to support the jurisdiction's efforts to respond to inquiries from family members about the status of loved ones (name, home address, phone, next of kin, etc.).

- Upon termination of emergency, submits a mass care expenditure statement to appropriate authorities for reimbursement.

Mass Care Facility Manager

- When notified, stands by for further instructions or report to assigned mass care facility, as appropriate.

- Contacts team members and instructs them to take whatever actions that may be appropriate.

- Staffs and operates the mass care facility. Upon arrival at the facility, takes the necessary actions to open it, receive evacuees, and provide for their health and welfare.

- Contacts the EOC when the facility is ready to open.

- Opens and keeps the facility operating as long as necessary.

- Implements registration procedures for all evacuees that enter the facility.
- If tasked, provides the Mass Care Coordinator with names and other appropriate information about people sheltered in the facility, to respond to family inquiries.
- Ensures individual and family support services are provided at the mass care facility.
- Ensures space is available for service animals that belong to people with disabilities.
- If companion animals are not permitted in the facility, provides information to their owners about shelters that have been opened to house and care for animals.
- Each day, reports the following to the EOC:
  - The number of people staying in the facility.
  - The status of supplies.
  - Condition of the facility and any problem areas.
  - As necessary, a request for specific types of support.
- Maintains records of expended supplies.
- Arranges for the return of evacuees to their homes or for transportation to temporary housing, if necessary.
- When appropriate, terminates operations and closes the facility.
- Cleans facility and returns it to original condition.

	➢ Submits mass care facility status report to the Mass Care Coordinator. The report identifies the equipment and supplies that are needed to restock the facility and any other problems that will need to be resolved before the facility is used again.
Emergency Manager	➢ Makes recommendations to the "CEO" on the number and locations of the mass care facilities to be opened.
	➢ Coordinates with the PIO to facilitate dissemination of information to the public on both the location of the mass care facilities that will be opened and directions to them.
	➢ Coordinates with the Mass Care Coordinator to activate the jurisdiction's mass care facilities.
American Red Cross (Local)	If appropriate, provides personnel to manage and staff mass care facilities.
Salvation Army (Local)	If appropriate, provides personnel to manage and staff mass care facilities.
Non-profit Public Service Organizations	If appropriate, provide personnel to manage and staff mass care facilities.
Education Dept./ School Superintendent	➢ If appropriate, provides personnel to manage and staff mass care facilities.
	➢ Shelters students in school buildings when the situation warrants or when directed to do so by the appropriate authority.

Law Enforcement	➢ Provides security at mass care facilities. ➢ Provides traffic control during evacuee movement to mass care facilities. ➢ Maintains order in mass care facilities. ➢ If necessary, provides an alternative communications link between the mass care facility and the EOC through a mobile radio unit in police vehicles.
Public Works	Ensures power, water supply, and sanitary services at mass care facilities are maintained during emergency conditions.
Public Information Officer (PIO)	Makes public announcement about availability of mass care facilities and animal shelters and their locations.
Military Department (if available)	➢ Informs Mass Care Coordinator of mass care facilities available on military installations. ➢ Coordinates use of mass care facilities on military installations. ➢ Provides logistical support for mass care operations.
Agricultural Extension Agent	Develops and maintains list of local food warehouses and other sources of bulk food stocks.
Animal Care and Control Agency	➢ Assesses the situation and makes a decision on the number and location of shelters that will be used to house animals. Typical facilities include the jurisdiction's animal shelter(s), veterinary hospitals, boarding

kennels, pet stores, greyhound farms, and fairgrounds. Facilities for agricultural animals could include sale barns, boarding stables, race tracks, horse farms, poultry barns, dairy farms, and fairgrounds/ rodeogrounds.

- Coordinates the actions needed to obtain sufficient personnel to staff animal shelters, as needed.
- Ensures each animal shelter has a highly visible identity marker and sign that identifies its location.
- Coordinates with the PIO to facilitate dissemination of information to the public on the location of the companion animal shelters that will be opened.
- Informs the Mass Care Coordinator of the location(s) of the shelters that have been opened.
- If appropriate, coordinates with the Mass Care Coordinator to place personnel in public shelters to act as a referral source for animal disaster operations.
- Opens shelters and provides food, water, and medical care, as needed, for the animals in the shelter.
- Keeps shelters open as long as necessary.
- Ensures each shelter receives the necessary supplies to sustain itself.
- When appropriate, terminates shelter operations and closes the facility.

Administration and Logistics

This section addresses the administrative and general support requirements associated with completing mass care tasking.

Specific administrative matters to be addressed include:

- Records and reports associated with tracking the status of mass care

operations.

- Attaching a listing of mass care facilities as an appendix. The list should include the facilities' location, people capacity, quantity and type of kitchens, beds available, stock levels of medical and sanitation supplies, food and water, sleeping bags, restroom facilities, vehicle parking capacity, etc. It also should identify the communication systems available, list telephone numbers, and indicate if there is an emergency power system available.

Plan Development and Maintenance

This section should identify who is responsible for coordinating revision of the jurisdiction's Mass Care Annex, keeping its attachments current, and ensuring that SOPs and other necessary implementing documents are developed.

Authorities and References

Authorities and references should be cited as appropriate.

Attachment G
Health and Medical

Introduction

This function deals with the activities associated with the provision of health and medical services in emergencies and disasters. For the purposes of this Guide, health and medical services include: emergency medical (EMS), hospital, public health, environmental health, mental health, and mortuary services. The activities associated with these services include treatment, transport, and

evacuation of the injured; disposition of the dead; and disease control activities related to sanitation, preventing contamination of water and food supplies, etc., during response operations and in the aftermath of a disaster. Depending on needs and resources, jurisdictions may want to prepare separate annexes for one or more of these health and medical services.

Developing a Health and Medical Annex

Purpose

A health and medical annex describes policies and procedures for mobilizing and managing health and medical services under emergency or disaster conditions.

Situation and Assumptions

This section provides a general assessment and overview of the jurisdiction's existing health and medical capabilities. It focuses on the jurisdiction's capability to provide medical care, treatment, and support to victims, response personnel, and the general public during the response and post-disaster phases.

This section also addresses limitations that may degrade health and medical operations. Assumptions addressed might include the following:

- The annex applies primarily to large-scale emergency and disaster events that would cause sufficient casualties and/or fatalities to overwhelm local medical, health, and mortuary services capabilities, thus requiring maximum coordination and efficient use of these resources.

- Public and private medical, health, and mortuary services resources located in the jurisdiction will be available for use during disaster situations.

- Large-scale emergencies and disaster threat situations (earthquakes, hurricanes, nuclear power plant accidents, floods, etc.) may affect large areas of the jurisdiction, the State, or other States, requiring the use of mutual aid.

- Public and private health and medical resources located in the

jurisdiction generally will be available for use during disaster situations, but many of these resources, including human resources, will themselves be impacted by the disaster.

- Emergency measures to protect life and health during the first 12 to 24 hours after the disaster in all likelihood will be exclusively dependent upon local and area resources.

- Resources available through area and regional medical, health, and mortuary services mutual aid agreements will be provided for use during the disaster situation.

- It may be necessary to relocate hospital facilities under austere conditions to contingency field hospitals, or to permanent or temporary buildings that will provide patients and medical staff adequate protection from the effects of the disaster.

- Volunteers will come forward to help perform essential tasks; their efforts must be anticipated and coordinated.

Concept of Operations

This section describes how health and medical operations will be conducted in the jurisdiction and in cooperation with other jurisdictions, other services, and the State and Federal governments.

General

This section details the provisions for mobilizing and managing health and medical services. It addresses pre-disaster, disaster, and post-disaster considerations. It identifies who will be in charge of directing health and medical operations and provides a general overview on how health and medical activities will be accomplished.

Because health and medical services include so many different activities, it is essential to establish a framework for these services to work together. To ensure that the necessary planning and coordination are accomplished prior to the occurrence of a disaster and to facilitate the management of health and medical services during disasters, it is essential to vest this planning and coordination responsibility in one position. An appropriate title for this position is "Health and Medical Coordinator." The individual that fills this position is

responsible for coordinating EMS, hospital, public health, environmental health, mental health, and mortuary services disaster planning and response actions.

The concept of operations should include provisions for:

- Establishment of medical command post at the disaster site(s).
- Coordinating health and medical response team efforts.
- Triage of the injured, if appropriate.
- Medical care and transport for the injured.
- Identification, transportation, and disposition of the deceased.
- Holding and treatment areas for the injured.
- Isolating, decontaminating, and treating victims of hazardous chemical or infectious diseases, as needed.
- Identifying hazardous chemicals or infectious diseases, controlling their spread, and reporting their presence to appropriate State and Federal health or environmental authorities.
- Issuing health and medical advisories to the public on such matters as emergency water supplies, waste disposal, mass feeding services, vectors, immunizations, disinfection, and others.

Interjurisdictional Relationships

This section describes the mutual aid arrangements for health and medical assistance to or from neighboring jurisdictions, the State, or jurisdictions outside of the State, when required. Further discussion is under the heading "Administration and Logistics," below.

Organization and Assignment of Responsibilities

This section describes tasked individuals' and organizations' responsibilities for providing emergency health and medical services in the jurisdiction. The following types of tasking may be assigned to the agencies and individuals listed in the left margin below:

Chief Executive Official ("CEO")

Requires the Health and Medical Coordinator to send a representative to the EOC when notified of an emergency situation.

Health and Medical Coordinator

Upon activation, or upon declaration or imminent declaration of an emergency or disaster:

- Reports to the EOC or other designated location as deemed appropriate; sends a representative to the EOC if unable to report in person.
- Rapidly assesses health and medical needs.
- Oversees and coordinates the activated health and medical organizations to assess their needs, helps them obtain resources, and ensures that necessary services are provided.
- Ensures that emergency medical teams responding to a disaster site establish a medical command post.
- Coordinates with neighboring community health and medical organizations and with State and Federal officials on matters related to assistance from other jurisdictions, including Federal assistance.
- Screens and coordinates with incoming groups such as Disaster Medical Assistance Teams (DMAT) as well as individual health and medical volunteers; ensures that positive identification and proof of licensure is made for all volunteers.
- Maintains a patient/casualty tracking system.
- Coordinates the location, procurement, screening, and allocation of health and medical supplies and resources, including human resources, required to support health and medical operations.

- Provides information through the PIO to the news media on the number of injuries, deaths, etc.
- Ensures appropriate health and medical services information is made available to the information processing section in the EOC.
- Coordinates support to the jurisdiction's efforts to respond to inquiries from family members concerned about loved ones.

Emergency Medical Services (EMS)

- Respond to the disaster scene with emergency medical personnel and equipment.
- Upon arrival at the scene, assume appropriate role in the ICS. If ICS has not been established, initiate in accordance with the jurisdiction's emergency management system and report implementation to the EOC.
- Triage, stabilize, treat, and transport the injured. Coordinate with local and regional hospitals to ensure casualties are transported to the appropriate facilities.
- Establish and maintain field communications and coordination with other responding emergency teams (medical, fire, police, public works, etc.), and radio or telephone communications with hospitals, as appropriate.
- Direct the activities of private, volunteer, and other emergency medical units, and of bystander volunteers as needed.
- Evacuate patients from affected hospitals and nursing homes if necessary.

Hospitals

- Implement internal and/or external hospital disaster plan.
- Advise the Health and Medical Coordinator or appropriate representative in the EOC of conditions of the hospital and number and type of available beds.

- Establish and maintain field and interhospital medical communications.
- Provide medical guidance as needed to EMS.
- Coordinate with EMS, other hospitals, and any medical response personnel at scene to ensure that casualties are transported to the appropriate medical facility. Distribute patients to and among hospitals both inside and outside the area based on severity and types of injuries, time and mode of transport, capability to treat, and bed capacity. Take into account special designations such as trauma centers and burn centers. Consider the use of clinics to treat less than acute illnesses and injuries.
- Coordinate with local emergency responders to isolate and decontaminate incoming patients, if needed, to avoid the spread of chemical or bacterial agents to other patients and staff.
- Coordinate with other hospitals and with EMS on the evacuation of patients from affected hospitals, if necessary. Evacuation provisions should specify where the patients are to be taken.
- Depending on the situation, deploy medical personnel, supplies, and equipment to the disaster site(s) or retain them at the hospital for incoming patients.
- Establish and staff a reception and support center at each hospital for the relatives and friends of disaster victims who may converge there in search of their loved ones.
- Provide patient identification information to the ARC upon request.

Public Health Officer

- Coordinates all public health services in the jurisdiction.
- Inspects for purity and usability all foodstuffs, water, drugs, and other consumables that were exposed to the hazard.

- Provides epidemiological surveillance, case investigating, and follow-up.
- Provides laboratory services for identification required to support emergency health and medical services.
- Coordinates operations for immunizations or quarantine procedures, if required.
- Establishes preventive health services, including the control of communicable diseases such as influenza, particularly in shelters.
- Monitors food handling and mass feeding sanitation service in emergency facilities, including increased attention to sanitation in commercial feeding and facilities that are used to feed disaster victims.

Environmental Health Officer

- Provides for the monitoring and evaluation of environmental health risks or hazards as needed and ensures the appropriate actions are taken to protect the health and safety of disaster victims, responders, and the general public.
- Implements actions to prevent or control vectors such as flies, mosquitoes, and rodents.
- Detects and inspects sources of contamination.
- Inspects damaged buildings for health hazards.
- Coordinates with the water, public works, or sanitation departments to ensure the availability of potable water, an effective sewage system, and sanitary garbage disposal.
- Coordinates with the animal care and control agency to dispose of dead animals.
- Ensures that adequate sanitary facilities are provided in emergency shelters and for response personnel.

Mental Health Agencies

- Ensure that appropriate mental health services are available for disaster victims, survivors, bystanders, responders and their families, and other community care-givers during response and recovery. Services may include crisis counseling, critical incident stress debriefings, information and referral to other resources, and education about normal, predictable reactions to a disaster experience and how to cope with them. There should be a capacity to provide specialized assistance for those affected by a traumatic event or who become traumatized by cumulative stress related to the disaster experience.

- Provide outreach to identify and serve those in need of mental health support.

  - Coordinate with the PIO to arrange for dissemination of information to the public.

  - Coordinate with the Mass Care Coordinator to identify shelter occupants that may require assistance.

- Have inpatient psychiatric facilities take the following actions:

  - Implement the facility's appropriate disaster plan.

  - Provide for the care, safety, and continued treatment of hospital residents.

  - Coordinate with appropriate authorities for the safe evacuation of residents.

  - Provide resources and support to the community-based mental health system in responding to the disaster mental health needs of impacted communities.

Mortuary Services

- Provide for the collection, identification, and care of human remains, determining the cause of death, inventorying and protecting deceased's personal effects, and locating and notifying the next of kin.

- Establish temporary morgue sites.

- Establish and maintain a comprehensive record-keeping system for continuous updating and recording of fatality numbers.

- Coordinate with:

  - Search and rescue teams, hospitals, EMS, and other emergency responders.

  - Funeral directors, morticians, and assets for transportation of deceased persons.

  - Other pathologists.

  - The ARC for location and notification of relatives.

  - Dentists and x-ray technicians for purposes of identification.

  - Law enforcement agencies for security, property protection, and evidence collection.

American Red Cross

- Provides food for emergency medical workers, volunteers, and patients, if requested.

- Maintains a DWI system in coordination with hospitals, aid stations, and field triage units to collect, receive, and report information about the status of victims.

- Assists in the notification of the next of kin of the injured and deceased.

- Assists with the reunification of the injured with their families.

- Provides blood, blood substitutes, and blood byproducts, and/or

	implementing reciprocal agreements for replacement of blood items. ➢ Provides first aid and other related medical support at temporary treatment centers, as requested, and within capability. ➢ Provides supplementary medical, nursing aid, and other health services upon request, and within capability. ➢ Provides assistance for the special needs of the handicapped, elderly, and those children separated from their parents, within capability.
Social Service Agencies	Assist in providing for the special needs of the handicapped, elderly, and children separated from their parents; also provide for special needs of orphaned children.
Animal Care and Control Agency	➢ Coordinates with veterinarians and animal hospitals to arrange for services for animals as needed. These might include service, companion, or farm animals, wildlife, etc. ➢ Coordinates with the Environmental Health Officer on the location, collection, and disposal of dead animals.
Police/ Corrections Department(as appropriate)	➢ Maintains emergency health services at juvenile and adult correctional facilities. ➢ Assists Mortuary Services in the identification of fatalities. ➢ Provides security assistance to medical facilities and to health and medical field personnel upon request.
Military Department	Provides personnel and equipment to support medical operations during disaster situations (at the direction of the Governor).

All Tasked Organizations

- Adhere to all professional and legal standards in the performance of duties.
- Provide ongoing status reports to the Health and Medical Coordinator, including number of deaths, injuries, etc.
- Provide and/or receive mutual aid in coordination with the Health and Medical Coordinator.
- Provide information to the Health and Medical Coordinator for dissemination of public advisories as needed.
- As needed, coordinate with other emergency health and medical services; with emergency services such as fire, police, and public works; and with the Health and Medical Coordinator.
- Refer all media requests for information to the Health and Medical Coordinator.
- Maintain updated resource inventories of emergency medical supplies, equipment, and personnel resources, including possible sources of replacements.
- Arrange for security to protect vulnerable work sites such as remote aid stations, temporary morgues, etc.
- Develop plans to evacuate and/or shelter, as appropriate, patients, staff, equipment, supplies, and vehicles before, during, and after disasters.
- Prepare detailed SOPs that include: call-down rosters for notifying personnel; step-by-step procedures for performing assigned tasks; telephone numbers and addresses/locations of similar services in other jurisdictions; area and local stores (grocery and drug), and medical warehouses that will provide pharmaceutical and medical supplies; telephone numbers, addresses, type, quantity, location, and procedures for obtaining transportation resources from Federal, State, local, and private organizations; and a listing of the radio communications call signs and frequencies that each responding organization uses.

- Designate staff to perform disaster duties.

Administration and Logistics

This section describes administrative and general support requirements for accomplishment of emergency health and medical tasks.

Administration

This section focuses on the administrative management of health and medical resources. It addresses the general support requirements and identifies sources that will be relied upon to obtain personnel, equipment, and supplies, transportation, facilities, services, and other resources required to support disaster response and recovery operations. Specific requirements include:

- *Medical Response Teams.* This section should first identify pre-organized medical teams within the jurisdiction. It should then sketch arrangements for requesting mutual aid teams from neighboring jurisdictions, from State sources, such as State Guard or militia units, and from Federal sources, such as military, Centers for Disease Control and Prevention (CDC), and National Disaster Medical System (NDMS) sources.

- *Augmentation Personnel*. This section describes the sources of health and medical personnel and the provisions (e.g., verifying adequacy of credentials for those who do not practice in the jurisdiction) that have been made to call upon them to augment disaster medical teams. They include:

  - Local emergency medical services personnel from medical and public health agencies and fire, police, public work, and other emergency services departments. Among these would be general physicians, specialists (qualifications should include hospital experience in trauma/disaster medicine), nurses, laboratory and x-ray technicians, emergency ambulance crews, etc.

  - State-employed general physicians, specialists (qualifications should include hospital experience in trauma/disaster medicine),

nurses, laboratory and x-ray technicians, emergency ambulance crews, etc.

- Volunteer/bystander health professionals including general physicians, specialists (qualifications should include hospital experience in trauma/disaster medicine), nurses, laboratory and x-ray technicians, emergency ambulance crews, etc.
- Medical school residents and teaching staff from throughout the State.
- Public Health Service (to include Federally sponsored DMATs and Veterinary Medical Assistance Teams).
- Other volunteer medical personnel from throughout the State.
- Armed Forces and the U.S. Coast Guard.
- The Indian Health Service.
- Department of Veterans Affairs personnel.
- Volunteer medical personnel from other States.
- Business and industry medical departments.

Logistics

This section addresses the arrangements that have been made to provide for the support needs of the organizations performing health and medical functions. Specific matters needing attention include:

➢ Sources of medical supplies and equipment:

- Local stores (hospitals, pharmacies, emergency vehicles, local government resources, et cetera). As appropriate, arrange for pharmacies to stay open 24 hours a day during specific periods for victims, evacuees, and responders.

- County-stored emergency aid stations, where available and usable.
- Mutual aid from jurisdictions not affected by the disaster.
- Private sector suppliers in the State.
- Private sector health care organizations that maintain a supply system for medical supplies and equipment.
- NDMS (Includes U.S. Department of Defense, Department of Health and Human Services, Department of Veterans Affairs, and FEMA.) Note: Local jurisdictions should work through their State emergency management agency and FEMA to obtain resources under the control of the Federal Government.

➢ Acquisition of medical/health equipment and supplies including:

- Initial supply and resupply for field medical operations.
- Initial supply and resupply for health and mortuary services.
- Resupply of functioning hospitals in the affected areas.
- Resupply of hospitals and other facilities outside the disaster areas receiving casualties.

➢ Transportation of medical/health supplies, personnel, and equipment:

- Local government-owned and commercial fixed-wing aircraft, trucks, and buses.
- Armed Forces fixed-wing aircraft, helicopters, and trucks.
- Private and public ambulance companies.

- Water transport.
- Limousine and taxi companies.
- Mortuaries (for hearses).
- Four-wheel drive and high-centered vehicles for medical evacuations under bad weather or terrain conditions.

➢ Shelter and feeding of field, health, and medical personnel and patients.

➢ Identification and selection of suitable facilities to serve as temporary morgue.

➢ Acquisition of embalming supplies, body bags, and necessary heavy equipment suitable for dealing with a mass fatality situation.

Plan Development and Maintenance

This section should identify who is responsible for coordinating revisions of the jurisdiction's Health and Medical Annex, keeping its attachments current, and ensuring that SOPs and other necessary implementing documents are developed.

Authorities and References

This section should highlight those statutes, regulations, administrative orders, etc., which provide authority for the preparation of medical and health services disaster plans and for designating the name of the agency and/or title of the officials responsible for management of medical and health services during disaster response and recovery operations. It should also cite:

➢ Authorities as applicable to coroner/medical examiner and mortuary services during disaster response and recovery operations.

➢ Authorities that provide for access to, use of, and reimbursement for private sector resources in an emergency, and for emergency procurement procedures.

➢ Authorities that provide for emergency powers under which emergency

medical and public health activities are authorized. Also, the extent of liability and/or immunity status of emergency medical, public health, and mortuary services workers.

- References that were used to prepare the jurisdiction's Health and Medical Annex.

Attachment H
Resource Management

Introduction

All responding agencies manage people, equipment, facilities, and supplies to accomplish their tasks. However, emergencies can require more specialized resources than the responding agencies have available. The resource management function is necessary to ensure that:

- A complete picture of available resources is known to decision-makers.
- All available resources are used appropriately and arrive where and when they are most needed.
- Additional resources can be secured for responders as their own resources are expended or damaged.
- Critical resource needs of the public are met despite disruption of commerce and infrastructure.
- Accountability is maintained for the jurisdiction's use of resources.

As presented here, resource management is a process that ranges from determining needs to finding and staging resources to meet these needs. In practice, different jurisdictions assign parts of this process to several different organizational elements. The goal of this Guide is not to prescribe an organizational arrangement, but to suggest all that is involved in resource management and how the pieces fit together. The Guide is meant to stimulate ideas, however your jurisdiction organizes to do resource management.

Developing a Resource Management Annex

Purpose

A resource management annex describes the means, organization, and process by which a jurisdiction will find, obtain, allocate, and distribute resources to satisfy needs that are generated by an emergency.

Situation and Assumptions

The situation and assumptions section describes the planning environment for the resource management function, i.e., factors that directly impact the ability of the jurisdiction to satisfy resource demand and manage support activities during response operations. Factors to be considered include:

Situation

- *Hazards*. The situation and assumptions section should outline the potential for emergencies requiring the resource management function. In particular, the section could highlight potential critical resource shortages (e.g., power, fuel in winter, potable water in times of drought or as a secondary effect of heavy flooding) and credible emergency scenarios that would deplete responding agencies' resources. Possible effects on the transportation and distribution network also should be noted.

- *Resources*. Complete listings of resources and planned requirements should be maintained in attachments to the plan, a resource manual/database, or in organizational SOPs, as appropriate. However, the situation section can summarize the jurisdiction's status for general resource categories, such as:

  - Personnel (including skilled labor and professionals).
  - Communications equipment.
  - Vehicles for passengers, cargo, and debris removal (e.g., dump trucks and garbage trucks).
  - Heavy equipment for public works applications (e.g., cranes, road graders, etc.) and materials handling (e.g., fork lifts, conveyor belts).
  - Pumps.
  - Useful materials and tools such as fuel, sand and sandbags, plastic sheeting (for roof repair, etc.), shovels, picks, chainsaws, hatchets, etc.

- Mass care supplies such as medicine and first aid supplies; potable water; food; bedding, blankets, and cots; sanitation supplies (e.g., portable toilets), lighting (lanterns, candles, etc.).
- Portable generators.

➢ *Mutual Aid.* The situation and assumptions section can also note the jurisdiction's participation in mutual aid agreements.

Assumptions Assumptions might include the following:

➢ *Information*. A resource inventory or database will be maintained by the Emergency Manager or the Resource Manager.

➢ *Initial sustainability.* Response agencies will sustain themselves during the first 24 hours of an emergency. Households and businesses located in the area directly affected by the emergency situation will sustain themselves during the first 72 hours of an emergency. (An ongoing public information activity will help ensure that the population knows what to include in a disaster supply kit.)

➢ *Evacuee Support*. Evacuees located in a mass care facility will receive necessary life sustaining services from the facility.

➢ *Donations*. A resource management annex should acknowledge the potential for donations, given any emergency--even a forecast emergency-- that generates sustained media coverage.

➢ *Availability of volunteers*. Performance of the resource management function will depend on the availability of a large pool of volunteers. Offers of help will be received.

➢ *Access to Mutual Aid*. If the jurisdiction is depending on mutual aid to cover resource shortfalls, it assumes some parties to the agreement will themselves be affected and unable to provide the resources.

➢ *Availability of aid from a higher level of government*. Pressure on the resource management function to supply unmet needs of response

agencies may be reduced by assistance from the next higher level of government. (However, the resource management function will still be necessary given uncertainty over the timing, form, and amount of that assistance relative to the jurisdiction's needs. Resource management planning is also necessary to generate detailed information on needs and logistics that the higher level of government may not have.)

Concept of Operations

This section should describe how the resource management organization will be activated and the sequence of tasks it will perform. It also should set forth resource management policies (if these are not described in a separate "Policies" section).

General

General policies might include:

- *Priorities*. Disaster victims will take precedence in the allocation of resources. Specific priorities will be set by the **Resource Manager** in consultation with the "CEO" or a designated official in the EOC.
- *Initial sustainability.* Response agencies will sustain themselves during the first 24 hours of an emergency.
- *Supplier of last resort*. Emergency services agencies should exhaust their own channels of support (e.g., mutual aid agreements with similar agencies in other jurisdictions) before turning to the resource management function.
- *Costs.* Purchase prices and contract costs, where possible, should be established during development of the EOP. Even if eligible for reimbursement, costs should initially be considered the responsibility of the requesting agency.

Sequence of Activities

- *Notification*. The **Resource Manager** should be among those initially notified of an emergency. When warning is available, suppliers with whom agreements exist should be notified of the intent to activate the agreements.
- *Activation and deployment*. The annex should specify who (the "CEO" or the Emergency Manager) activates the resource management

function. It also should specify the core cadre of staff that will perform the function at the EOC, regardless of the scope of the activation. The **Resource Manager**'s discretion and authority to activate additional facilities and personnel--for example, a Donations Coordination Team and associated telephone banks, donations receiving areas, checkpoints, and warehouses--should be indicated. (A complete breakout of the staffing requirements at each possible facility is appropriate as a tab to the Administration and Logistics section, but could be referenced here.)

- *Emergency activity.* The concept of operations should address four basic concerns of emergency resource management activity: determining needs, obtaining supplies, maintaining financial and legal accountability, and distributing supplies. See Figure 5-H-1.

  - *Determining needs.*

    - *Needs assessment (ongoing).* The annex should explain how needs known in the field will become known to the resource management organization. At first, this may be a matter of anticipating needs based on preliminary damage assessments and past experience. The **Resource Manager** should relay to the resource management organization all needs determined by the "CEO." All agencies should be tasked to report to resource management--whether directly or through the EOC Manager--any needs they are unable to meet through their own channels as the emergency progresses. For its part, the resource management organization must ensure that it extracts the essential information from those who report a need. Essential information includes:
      - WHAT is needed and WHY, as specifically as possible (since a different item might work as well or better and be readily available).
      - HOW MUCH is needed.
      - WHO needs it.

* WHERE it is needed.
* WHEN it is needed.

– *Prioritization (ongoing)*. The **Resource Manager** will apprise "the **Needs Group**" of priorities set by the "CEO" or a designated representative. A formal classification system may be useful. Note that among the highest priorities may be satisfying needs of the resource management organization, e.g., securing the use of any additional facilities required by the Resource Manager.

– *Follow-up*. Resource requests should be logged, prioritized, passed on to those responsible for obtaining and committing resources, and then tracked (as Pending, En Route, Met, etc.) via subsequent feedback from "the **Supply Group**," "the **Distribution Group**," and the requesting party. The **Resource Manager** should receive reports on a regular basis about needs and the status of requests.

- *Obtaining Supplies*.

– *Notification of suppliers*. When warning is available, the **Supply Group** should notify suppliers with whom agreements exist of the jurisdiction's intent to activate the agreement. Availability of supplies should be validated and key items should be reserved.

– *Evaluation of requests against known supplies (ongoing)*. Upon receipt of a request, the **Supply Group** should attempt to fill the need with jurisdictional resources or resources for which agreements are in place. If the needed resource is on hand, the **Supply Group** contacts the supplier, confirms transportation responsibilities and provides necessary information (e.g., to pass checkpoints), notifies the **Distribution**

Group of the incoming resource (or of the need to pick it up) and its priority, and informs the **Needs Group** that action has been taken on the request. If the needed resource is not listed among prearranged supplies, the next step is to see if a workable offer to donate it has been made (assuming a Donations Coordination Team has been activated). If not, the options are to procure (or hire) or to solicit a donation of the needed resource.

- *Procurement and Hiring*. When requests are of high priority for the jurisdiction, an expedited procurement or hiring process may be in order. Procurement involves contacting suppliers, negotiating terms (in coordination with the **Financial Officer** and **Legal Advisor** if necessary), making transportation arrangements, notifying the **Distribution Group**, and notifying the **Needs Group** of action taken. Hiring can take advantage of local or State job service records and personnel, any "applicant supply files" the government personnel office maintains for particular types of positions, etc., in order to fill positions.

- *Soliciting Donations*. When high priority needs cannot be satisfied quickly through procurement and hiring, or when cost begins to outweigh time as a consideration, an appeal can be made through a Donations Coordination Team and the PIO for donations of the goods or service in question. See the National Donations Steering Committee's *Donations Management Guidance Manual*.

- *Maintaining financial and legal accountability.* The **Finance Officer** should keep the **Resource Manager** and the **Supply Group** aware of their authorized budget, log and process transactions, track accounts, and secure access to more funding as necessary and feasible (e.g., ensuring jurisdictional access to cash donations, where law permits). The **Legal Advisor** should keep them aware of their legal obligations--and also of any special powers granted by law to expedite their tasks.

- *Distributing goods (and services)*.

  - *Activating and operating key facilities*. The **Resource Manager** should determine what facilities (e.g., donations receiving areas, checkpoints,

warehouses) will be required to handle the flow of resources into and through the jurisdiction. The **Resource Manager** should then direct the **Distribution Group** to set up and operate the facilities.

- *Traffic control*. The **Distribution Group** should ensure that high priority resources are dispatched quickly to where they need to be. Unnecessary traffic should be held back or rerouted.

- *Hauling*. Procurement and donations efforts should try to ensure that suppliers of a resource also supply transportation for it: the jurisdiction's transportation resources may be almost fully committed. However, the **Distribution Group** may be tasked to pick up resources.

- *Reporting and coordination*. From the EOC, the **Distribution Group** would notify checkpoints and other facilities (as applicable) of incoming resources to expect, as well as their priority designation. Checkpoints and other facilities (as applicable) would provide regular reports on resources passing through (or inventory), allowing the **Distribution Group** to track location of resources and timeliness of delivery.

➢ *Post-emergency activity (recovery)* When needs have largely been met, the crisis subsides, and the jurisdiction's government can begin to function in its normal, day-to-day mode, the resource management function will have to address four areas:

- *Disposal of excess stocks.* Loaned equipment will have to be returned to its owners. Surplus property can be dealt with through normal procedures--except perhaps where hazardous materials are concerned. Warehouse space may be needed for excess donations as local and area volunteer agencies attempt to absorb them; a Donations Coordination Team would then

have a role in finding takers for the excess.

- *Stand down*. Facilities and staff should be deactivated as soon as is feasible, with all reports and documentation filed.

- *Financial settlement*. The jurisdiction may need to reimburse or compensate the owners of private property. It may also have to submit required reports that address the jurisdiction's financial liability for any assistance received under the Stafford Act.

- *Thank-you's*. Suppliers and donors who came through for the jurisdiction should receive some acknowledgment, as feasible and in coordination with the Office of the Chief Executive and the PIO. New suppliers might be polled about their interest in developing a memorandum of agreement in time for the next emergency.

Coordination with Voluntary Agencies

A resource management annex should address how the jurisdiction's government will coordinate its resource management activities with voluntary agencies' own donations management efforts. It also should address policies on use of volunteer labor.

Local, State, and Federal Coordination

The resource management annex should describe what relationship, if any, the resource management function has to the resource support efforts of the next higher level of government. For example, State donations management planning should recognize that an 800 number and technical assistance are available through FEMA upon request.

Organization and Assignment of Responsibilities

The organizational scheme used here (see Figure 5-H-1, next page) is conceptual. It was meant to reflect the process of resource management activity: determine needs, find a source for meeting the needs, ensure financial and legal accountability, and transport and distribute the resources. It should be adapted to conditions in the jurisdiction. For example, in some local jurisdictions one person may receive and log requests, determine resource availability, and initiate procurement actions if needed. They may leave donations management work to voluntary agencies or a State Donations

Coordination Team. In some States, transportation or financial management may be separate functions, and donations management may be a subset of mass care logistics. The important thing is to ensure that the entire process of resource management is well coordinated, however it is organized.

(Those jurisdictions opting to treat donations management separately should recognize and structure the links between it and the resource management function. Both functions will rely on the jurisdiction's transportation, distribution, and traffic control systems. Each will need access to the other's information regarding needs and supply: donations management can supplement resource management's efforts to obtain certain items and also should relay useful bids from the contractors and vendors that inevitably call donations hotlines; at the same time, donations management may be unsuccessful in filling some identified needs by a certain time, making procurement through resource management necessary.)

The following types of tasking should be performed for resource management, and could be assigned to individuals and organizations as listed in the left margin below:

Resource Manager

Upon arrival at the EOC:

- Directs and supervises the activities of the Needs, Supply, and Distribution Groups.

- Coordinates with the EOC Manager and key organizations' representatives in the EOC regarding needs and priorities for meeting them.

- During the emergency, monitors potential resource shortages in the jurisdiction and advises the Emergency Manager or "CEO" on the need for action.

- Identifies facilities/sites that may be used to store needed resources and donations.
- Determines the need for and directs activation of facilities necessary for the coordinated reception, storage, and physical distribution of resources.
- Makes arrangements for work space and other support needs for resource management staff.

Needs Group Receives requests and reports on the function's success in meeting needs; under Resource Manager. (Includes Needs Analyst and Needs Liaisons.)

Needs Analyst

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- During multiple scene emergencies or disasters, monitors resource demands from Incident Command Logistics Officers and maintains list of all staging area resources, itemized by incident location.
- Tabulates needs assessment and specific requests.
- Prioritizes needs for Supply Group, with concurrence of Resource Manager.
- Provides regular reports to Resource Manager on the status of requests (e.g., pending, en route, met).

Needs Liaisons (May be specialists in a certain resource category, the better to elicit essential information from requester.)

- When notified of an emergency, report to the EOC or other location specified by the Resource Manager.
- Receive specific requests, eliciting essential information from requesting

parties.

Supply Group

Locates and secures resources. Headed by Supply Coordinator. As needed, includes teams for procurement, personnel, and donations. Should be supported with financial information and legal advice.

Supply Coordinator

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- Determines appropriate means for satisfying requests (with concurrence of Resource Manager).
- Handles unsolicited bids.
- Keeps Needs Group informed of action taken on requests.
- Keeps Distribution Group informed of expected movement of resources, along with the priority designation for the resources.
- Requests transportation from Distribution Group (with concurrence of Resource Manager).

Donations Coordination Team

Headed by a Donations Coordinator.

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- Receives offers of donated goods and services.
- Matches offers to needs (whether those of its own separate needs assessment or those of the larger jurisdictional needs assessment).
- Through PIO, disseminates information to ensure that offers are not inappropriate to needs.
- Makes special requests as directed by Supply Coordinator.

- Ensures that Resource Manager is apprised of needs/"unmet needs" list and that physical distribution efforts (in those jurisdictions that treat donations logistics separately) are coordinated with the Distribution Group.

Procurement Team

Undertakes *ad hoc* procurement as directed by Supply Coordinator; otherwise, uses database and/or resource listings to fill requests through prearranged supply channels. May consist of specialists in a certain resource category.

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- When warning is available and as directed by Supply Coordinator, notifies private industry parties to any memorandum of agreement of the jurisdiction's intent to activate the agreement, confirms availability of resources specified by the agreement, and reserves supply.
- Locates needed resources using database and/or resource listings for the jurisdiction and participating suppliers.
- As directed by Supply Coordinator, seeks to procure resources not available through pre-arranged channels.
- In all cases, contacts suppliers, settles terms for transportation, and provides information necessary to pass checkpoints.
- Informs Supply Coordinator when the jurisdiction must provide transportation in order to make use of the resource.

Personnel Team

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- As directed by Supply Coordinator, recruits and hires personnel to meet emergency staffing needs.

Financial Officer

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- Oversees the financial aspects of meeting resource requests, including record-keeping, budgeting for procurement and transportation, and facilitating cash donations to the jurisdiction (if necessary and as permitted by the laws of the jurisdiction).

Legal Advisor

- When notified of an emergency, reports to the EOC or other location as specified by the Resource Manager.
- Advises Supply Coordinator and Procurement Team on contracts and questions of administrative law.

Distribution Group

Ensures delivery of resources by overseeing routing, transportation, collection, sorting/aggregating, storage, and inventory.

- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- Transports resources, as requested.
- Controls movement of resources.
- Performs materials-handling work.

Distribution Coordinator

- Heads Distribution Group.
- When notified of an emergency, reports to the EOC or other location specified by the Resource Manager.
- Oversees transportation and physical distribution of resources.
- Ensures facilities are activated as directed by Resource Manager.

- When multiple scene emergencies or disasters occur, establishes liaison with all Incident Command Staging Officers to monitor location, passage, and inventory of resources.
- Monitors location, passage, and inventory of resources.

Emergency Manager	Assists the Resource Manager as needed during response operations.
Department of General Services or equivalent	Provides knowledgeable staff to serve on Supply Group (Supply Coordinator, Procurement Team), Distribution Group (warehousing, etc.) and in other capacities as appropriate.
Office of Personnel and Job Service	Provide knowledgeable staff for Personnel Team to obtain human resources.
Comptroller's Office or equivalent	Provides knowledgeable staff to serve as Financial Officer (and associated support).
Legal Counsel or equivalent	Provides expert in contracts and administrative law to assist Supply Group's Procurement Team.
Office of Economic Planning or equivalent	Provides knowledgeable staff to serve on Needs Group.
Police	Provides escort and security as appropriate for the delivery, storage, and

Department or equivalent

distribution of resources.

Department of Transportation or equivalent

- Provides knowledgeable staff to serve on Distribution Group.
- Assists in procuring and providing transportation.

All Agencies

- Provide staff knowledgeable in a particular resource category to serve as Needs Liaisons and/or Procurement Team members, as appropriate.
- Provide updated emergency resource listings on a regular basis or as requested by Resource Manager.
- Make personnel/resources available as needed in an emergency.

Administration and Logistics

This section addresses the administrative and general support requirements for carrying out resource management tasking.

Administration

The following specific areas should be addressed:

Reports and records. The annex should address what kinds of records must be kept, for how long, in what form (e.g., hard copy or database); what reports should be made, from whom to whom, in what format; and how records vital to operations will be protected. (Note: Hard copy "resource manuals" are useful, but where possible jurisdictions should take advantage of the search

and sorting capacities of a computer database in maintaining the resource inventory.)

- *Finance*. The annex should address the jurisdiction's financial policies, e.g., regarding use of funds already appropriated and how contingency funds will be made available.
- *Procurement*. The annex should note the jurisdiction's policies on

emergency procurement.

- *Hiring and Other Personnel Issues*. The annex should note waivers of normal procedure for matters of hiring, assigning work that is not in an employee's job description or at an employee's normal duty station, and the like.

Logistics The following specific areas should be addressed:

- *Staffing*.
  - *Core Cadre*. The annex should identify by position what staff will be required to perform the resource management function, regardless of the nature or scope of the emergency.
  - *Maximum Complement*. The annex also should set forth an estimate, based on the kinds and number of facilities that would be activated, of the maximum number of personnel that would be needed to support the resource management function. A breakdown by facility would be useful.
  - *Augmentation*. The annex should indicate the means the jurisdiction will use to meet a staffing shortfall in the resource management function, be it reassignment of jurisdictional personnel, aid from other jurisdictions, area volunteers, or use of the National Guard.
- *Facilities*.
  - *Minimum*. The annex should spell out where basic resource management activities will be conducted, if locations other than the EOC are involved (e.g., if procurement activity will be conducted from the Department of General Services, with communications links to the EOC).
  - *With significant influx of aid expected*. The Resource Manager may direct that other facilities be activated, such as the

following:

- *Point of Arrival*. The FRP refers to the "point of arrival" as "the designated location (typically an airport) within or near the disaster-affected area where newly-arriving staff, supplies, and equipment are initially directed." While meant for States expecting Federal resources, this FRP concept is a useful planning consideration for any jurisdiction that could expect to receive significant mutual aid: some idea must be had of where to report first.

- *Mobilization Centers*. A mobilization center is a designated location for receiving and processing resources and personnel prior to their deployment to a staging area or incident site. It may coincide with the point of arrival. For arriving personnel, the mobilization center may have to provide briefings, billeting, and feeding. Local jurisdictions should identify potential mobilization centers.

- *Staging Areas*. At staging areas, personnel and equipment are assembled for immediate deployment to an operational site in the affected area. Local jurisdictions should identify potential staging areas; options include fairgrounds and academic facilities.
- *Warehouses and other storage facilities*. Aid from governmental sources should not exceed the capacity of mobilization centers, staging areas, the incident site, and the jurisdiction's agencies to absorb it. However, the jurisdiction may wish to make arrangements with realtors to provide a regular update on warehouse availability. Alternatives include making arrangements with military installations and neighboring jurisdictions to assist with any logistical excess.

- *With extensive donations expected*. At the State level, the

Resource Manager and/or Donations Coordinator may require the following facilities to handle donations, as discussed in the *Donations Management Guidance Manual*. Local jurisdictions should consult the State on how best to support the State donations management framework; however, large jurisdictions may wish to make similar provisions for handling donations within the jurisdiction.

- *Donations Coordination Center/Telephone Bank*. At a Donations Coordination Center, representatives of the jurisdiction's government and volunteer agencies screen unsolicited donations offers and match them with possible recipient organizations. States choosing to activate an 800 telephone number might set up the telephone bank at this facility.

- *Checkpoints.* Checkpoints permit inspection, scheduling, and (re)routing of inbound trucks and other vehicles bearing donations. At the State level, potential locations include weigh stations and rest areas.

- *Donations Receiving Area(s)*. A donations receiving area serves as a collection point and sorting area for unsolicited donations of goods. It should be located as close to air, water, and rail transport facilities as is feasible outside the disaster area. Other considerations include parking (for the large number of workers required), covered storage space, and ample room for trucks to maneuver. State fairgrounds have been used as donations receiving areas. Since fairgrounds also have been suggested as prime locations for staging areas, it should be noted again that jurisdictions must coordinate the logistical demands of donations management with those of the entire resource management system. (Note: Some people in donations refer to this facility as a "reception center"; however, that could cause confusion with the use of the same

term in evacuation.)

- *Warehouses*. Where possible, the donations effort should rely on volunteer agencies' warehousing capacity. However, should additional space be necessary--particularly when disposal of donations becomes difficult--the jurisdiction should have on hand information from realtors or a real estate board to locate suitable warehousing space.

- *Distribution Centers*. Goods are distributed directly to victims at distribution centers. Churches and volunteer agencies' facilities are good locations. In Federally declared disasters, distribution centers and Disaster Recovery Centers (DRC) can be collocated or fairly near one another to allow comprehensive service delivery to the affected populace.

- *Lodging*. An influx of volunteers and government workers creates a need for billeting. Provision should be made for this at points of arrival, mobilization centers, and even donations receiving areas; the space can be reclaimed for other purposes if sufficient hotel, church, or school gym space just outside of the affected area is available

- *Communications*. As a potentially far-flung enterprise, resource management depends on communications. The number of telephone lines, fax machines, and other standard equipment required will depend on the anticipated size of the jurisdiction's resource management operation. Special considerations include data modems for a State Donations Coordination Center (to receive information from the national database), a 1-800 trunk line for a State Donations Coordination Center (to receive calls), citizens band radio and dispatching for communicating with trucks, and internal communications systems for warehouses (such as walkie-talkies or a public address system).
- *Computers and software*. Resource management involves large amounts of information best handled with databases (resource listings)

and spreadsheet programs (financial management, inventory control). Reports will require a word processing program.

- *Office equipment and supplies*.

- *Forms.* Where hard copy forms are used, each facility should have a sufficient supply on hand from the start (e.g., in a "go kit"). Including the forms in the EOP also permits reproduction, if photocopiers are available.

- *Transportation*. The annex should discuss what transportation resources are available for resource management.

Plan Development and Maintenance

Much ongoing activity is necessary to support the resource management function, including: conducting planning meetings; updating resource listings; monitoring potential resource crises; developing and negotiating standard contracts and leases, memoranda of understanding, and mutual aid agreements; developing ready-to-use public information materials (or at least templates); writing and refining SOPs; training; and exercising the function. Responsibility for this activity should be assigned in this section.

The Emergency Manager should have responsibility for calling planning meetings on advice from the Resource Manager, who should determine how often to hold meetings. Meeting organizers should strive to include representatives from groups such as private industry, professional and labor associations, volunteer groups, and the media (at least when donations are an issue).

The annex may specify what triggers the need to revise the annex, including plan review, exercise results, post-event critiques, changes in the hazard situation, or the incorporation of new players and new technology.

Authorities and References

Authorities and references that might be included, cited, or consulted include:

Authorities

- Robert T. Stafford Disaster Relief and Emergency Assistance Act.

- State/local emergency legislation, in particular matters of eminent

domain, rationing and price controls, and the like.

- State/local procurement regulations, in particular any provisions for an expedited process (e.g., suspension of "full and open competition" requirements).

- State/local personnel regulations, in particular any special hiring authorities.

References

- FEMA/National Donations Steering Committee, *Donations Management Guidance Manual*, January 1995.

- The Federal Response Plan, April 1992.

- State/local resource listing compilation, if maintained under separate cover.

- State/local compilation of memoranda of agreement.

- Other resource directories (e.g., from real estate board).

- Suggested attachments.

  - Map identifying key facilities and transportation routes (perhaps with overlay of likely hazard areas, if known).

  - Organizational chart.

  - Staffing charts.

  - Resource requirements for the resource management function.

  - Sample forms (e.g., resource inventory, donations intake form, report formats).

Chapter 6
Hazard-Unique Planning Considerations

Introduction

This chapter provides guidance for developing hazard-specific appendices. Hazard-specific appendices offer a means of extending functional annexes to address special and unique response procedures, notifications, protective actions, emergency public information, and other needs generated by a particular hazard. They allow the jurisdiction, in its EOP, to address priorities identified through hazard analysis and to meet detailed regulatory requirements associated with some hazards. A hazard-specific appendix should be prepared for any functional annex that does not, by itself, give enough information to perform the function adequately in the face of a particular high-priority hazard. Some hazards may require that appendices be prepared for various functional annexes; others may affect planning for only one or two functions. Appendices may be long or very brief depending upon need.

> *Think of hazard-specific appendices as* supplements *to functional annexes. Planning considerations common to all hazards should be addressed in functional annexes, not repeated in hazard-specific appendices.*

Development of a Hazard-Specific Appendix

The decision to develop a hazard-specific appendix should be based on special planning requirements not common to other hazards addressed in the functional annex, and on regulatory considerations that may require extensive, detailed planning that is inappropriate for inclusion in the annex.

As the planning team develops each of the functional annexes, close scrutiny must be given to the "unique" characteristics of those hazards that require special attention. Further, the planning team must know the regulatory requirements associated with the hazards their jurisdiction faces.
This approach promotes consistency and continuity and provides the flexibility to include a hazard-specific appendix or not, based on the need to cover information that is relevant to the hazard, but is not appropriate for inclusion in the functional annex.

Content of a Hazard-Specific Appendix

The content of a hazard-specific appendix focuses on the special planning needs generated by the hazard and should not duplicate the information in the functional annex. The appendix contains unique and regulatory response planning details that apply to a single hazard. It addresses the essential operational actions that must be accomplished to facilitate the successful completion of a particular response function. As appropriate, the appendix should quantify the risk area, geography, and demography considerations that apply to the hazard.

It is recommended that hazard-specific appendices follow the same structure--i.e., include, as appropriate, the same content sections (Purpose, Situation and Assumptions, Concept of Operations, Organization and Assignment of Responsibilities, Administration and Logistics, Plan Development, and Authorities and References)--as the functional annexes.

Tabs may be used to: identify hazard-specific risk areas and evacuation routes; specify provisions and protocols for warning the public and disseminating emergency public information; and specify the types of protective equipment and detection devices for responders, etc. Tabs serve as work aids, and include such things as maps, charts, tables, checklists, resource inventories, and summaries of critical information.

The responsibility for making the decision on what to include in a hazard-specific appendix is vested with the jurisdiction's planning team. The flexibility of the planning approach described in this Guide should make it possible to accommodate and satisfy:

- The planning requirements associated with unique aspects of hazards and with various regulatory authorities.
- The different constituencies in the jurisdiction's emergency response organizations.
- The members of the planning team.

Table 6-1 identifies the core functional annexes discussed in Chapter 5, and provides a synopsis of the typical hazard-specific planning considerations that are associated with them. The planning team should consider Table 6-1

when making its decision on the kinds of information to be included in the appendices that they deem it is appropriate to prepare.

Description of Unique and Regulatory Planning Considerations

The attachments provide a brief summary of seven significant hazards that threaten many communities in the United States. The information provided on each of these hazards focuses on the specific types of planning considerations that should be examined, analyzed, and applied, as appropriate, in the development of hazard-specific appendices. The format for each attachment has been structured to be consistent with the planning considerations outlined above. Please note that what follows is only summary information. Information on other hazards your jurisdiction faces and additional relevant data on the hazards addressed in this chapter should be readily available to the planning team. Much of the needed information should have been gathered as part of the jurisdiction's hazard analysis. For additional information, the planner should review the applicable hazard-specific planning guides and other relevant technical manuals to gain more insight into the hazards and to obtain detailed information on the emergency response planning considerations associated with each one.

Attachment A
Earthquake

The Hazard

Nature of the Hazard

A sudden, violent shaking or movement of part of the earth's surface caused by the abrupt displacement of rock masses, usually within the upper 10 to 20 miles of the earth's surface. The earthquake hazard may consist of:

Ground Motion

Vibration and shaking of the ground during an earthquake is the most far-reaching effect and causes the most damage to buildings, structures, lifelines, etc.

Ground Surface Fault Rupture

The ground shaking is the result of a rupture of a fault beneath the surface. When the ground shaking results in a rupture of the surface of ground, an opening of up to 20 feet may occur.

Liquefaction

The ground temporarily loses its strength and behaves as a viscous fluid (similar to quicksand) rather than a solid.

Landslides

Sometimes an earthquake causes a landslide to occur. This involves a rock fall and slides of rock fragments on steep slopes.

Tsunamis

Tsunamis are sea waves produced by an undersea earthquake. These sea waves caused by the earthquake can reach 80 feet and can devastate coastal cities and low-lying coastal areas.

Secondary Hazards

Consequences of earthquakes may include fire, HAZMAT release, or dam failure, among others.

Risk Area

Wide areas of the United States have some vulnerability to earthquakes. Thirty-nine States face the threat of a major damaging earthquake and are considered to be earthquake hazard areas. The planning team in each of the jurisdictions in these States should use information from their State's earthquake hazard identification study to quantify the seismic hazard their community faces. This study addresses the magnitude, estimates the amount of ground shaking that

could occur, and delineates the associated geological hazards (landslide, liquefaction, etc.) that may occur as a result of a catastrophic earthquake. Further, a vulnerability assessment should have been prepared as part of the hazard analysis. The assessment provides the planning team information related to probable consequences and damages their jurisdiction may suffer if struck by an earthquake. It focuses on casualties and injuries; potential building losses and identifies the buildings most vulnerable to seismicity (including critical facilities such as hospitals, EOCs, mass care centers, emergency services organizations' work centers, water and waste management plants, power companies, etc.); medical needs versus available medical resources; loss of utilities and replacement/repair time; etc. caused by the earthquake and the collateral hazards it may trigger (e.g. fires, dam or levee failure, tsunamis, HAZMAT spills, etc.). This information will help the team develop the appropriate information for inclusion in the EOP.

Earthquake Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendix for earthquakes. It also identifies the unique and/or regulatory planning considerations that should be examined by the planning team and used, as appropriate, when preparing earthquake-specific appendices.

Direction and Control

For this hazard it is essential for emergency response personnel to take immediate action to gather damage assessment information. This information is needed to determine the severity and extent of injuries and damages. Further, this data gathering effort should provide much of the information decision makers will need to implement and prioritize response actions for: US&R activities, access control and re-entry to the impacted area, debris clearance, restoration of utilities and lifeline repairs, and the inspection, condemnation, and or demolition of buildings and other structures.

Therefore, provisions should be made, as appropriate, to address the following planning considerations in one or more appendices to a direction and control annex:

Damage

Conduct of ground and aerial surveys to determine the scope of the damage,

Assessment

casualties, and the status of key facilities.

Search and Rescue

Removal of trapped and injured persons from landslides, buildings collapses, and other structural collapses, administering first aid, and assisting in transporting the seriously injured to medical facilities. This activity involves the use of professional and volunteer search teams including the use of dog teams. Consideration should be given to:

- Use of damage assessment information to identify the facilities and areas where US&R operations are to be conducted and to establish a priority for conduct of these operations.

- Request for Federal assistance to perform US&R operations.

Major consequences associated with an earthquake are the collapse of buildings and other structures, and landslides. In a metropolitan area that is struck by a major earthquake many hundreds to thousands of people could be trapped. These trapped people need immediate assistance. In such situations, it is likely that local and State governments would be overwhelmed by the demand for emergency services. Further, most jurisdictions do not have a sufficient quantity of specialized equipment or enough trained teams available to accomplish the large-scale search and rescue operations that would be needed to respond to a catastrophic earthquake. In order to assist State and local governments to accomplish this critical lifesaving activity, the Federal Government has established Federal US&R teams. These teams are available to State and local jurisdictions upon request. The FRP's ESF-9 includes provisions for deploying Federal US&R teams. These teams augment State and local emergency response efforts to locate, extract, and provide for the immediate medical treatment of victims trapped in collapsed structures.

Access Control and Re-Entry

This section deals with the immediate actions to be taken, as soon as conditions permit, in the area that was severely impacted by an earthquake. Relevant considerations include:

- Control of access to the area until it is safe. Only those people directly involved in emergency response operations should be allowed to enter.

- Establishing a protocol for determining the appropriate time to allow evacuees and the general public to re-enter the area that was severely impacted.

Debris Clearance

The identification, removal, and disposal of rubble, landslides, wreckage, and other material which block or hamper the performance of emergency response functions should be a high priority action. Activities may include:

- Demolition and other actions to clear obstructed roads.
- Repair or temporary reinforcement of roads and bridges.
- Construction of emergency detours and access roads.

Inspection, Condemnation , Demolition

Inspection of buildings and other structures to determine whether it is safe to inhabit or use them after an earthquake has occurred. Activities may include:

- Inspection of buildings and structures which are critical to emergency services operations and mass care activities. Designate those that may be occupied and identify/mark those that are unsafe.
- Inspection of buildings and structures that may threaten public safety. Identify/mark those that are unsafe and may not be occupied.
- Inspection of dams and levees.
- Inspection of less critical damaged structures. Designate those that may be occupied and identify/mark those that are unsafe to occupy.
- Arrangements for the demolition of condemned structures.

Utilities and Lifeline Repairs

Restoration and repair of electrical power, natural gas, water, sewer, and telephone and other communications systems to minimize the impact on critical services and the public.

Warning

Earthquakes usually occur without warning. Although some earthquakes have been successfully predicted, a reliable warning system has not been developed. However, it is appropriate for those jurisdictions located on the West Coast,

Hawaii, and Pacific Insular areas where a large seaquake or undersea volcanic eruption may occur to include an appendix in their plan that will facilitate the issuance of a tsunami warning.

Emergency Public Information

The flow of accurate and timely emergency information is critical to the protection of lives and property in the wake of a catastrophic earthquake. This section deals with the provisions that should be included in the plan for the preparation and dissemination of notifications, updates, warnings, and instructional messages. The following planning considerations should be examined and addressed, if appropriate, in one or more appendices to an EPI annex:

- Survival tips for people on what to do during and immediately after an earthquake.
- Warnings and advice on the continuing threat of fire, unsafe areas, building collapse, aftershocks, and other hazards.

Evacuation

Immediately following an earthquake people may need to be evacuated. People should be evacuated from structures that have been damaged and are likely to receive more damage when hit by one or more of the aftershocks. An appendix to an evacuation annex should address special provisions for moving the residents of custodial facilities (hospitals, jails, mental health facilities, nursing homes, retirement homes, etc.) following an earthquake.

Mass Care

The information gained from the vulnerability assessment should be used to ensure the following needs are addressed, if appropriate, in one or more appendices to a mass care annex:

Safe Location of Facilities

If possible, identify mass care facilities in low seismic risk areas that are also out of the way of secondary effect threats (e.g., flooding from a damaged dam).

Structural Safety

If the facilities selected for use are located within the earthquake hazard area, ensure that a structural engineer, knowledgeable of the earthquake hazard:

- Identifies facilities for use that are structurally sound, well retrofitted or

built to code.

- Ranks the facilities based on the amount of earthquake resistance/ protection each one offers.

Attachment B
Flooding and Dam Failure

The Hazard

Nature of the Hazard

Flooding occurs when normally dry land is inundated with water (or flowing mud). Flooding may result from: bodies of water overflowing their banks, including artificial ones like dams and levees; structural failure of dams and levees; rapid accumulation of runoff or surface water; hurricane-caused storm surges or earthquake-caused tsunamis; or erosion of a shoreline. (Coastal flooding and erosion are not treated in this attachment.) Typically, the two parameters of most concern for flood planning are suddenness of onset--in the case of flash floods and dam failures--and flood elevation in relation to topography and structures. Other factors contributing to damage are the velocity or "energy" of moving water, the debris carried by the water, and extended duration of flood conditions. Flooding can happen at any time of the year, but predominates in the late Winter and early Spring due to melting snow, breakaway ice jams, and rainy weather patterns.

Risk Area

All States and territories are at risk from flooding. Apart from a rainy climate, local risk factors, usually present in combination, include:

Rivers, Streams, and Drainageways

These are bodies of water often subject to overflowing. The size of the stream can be misleading; small streams that receive substantial rain or snowmelt, locally or upstream, can overflow their banks. High-velocity, low elevation flooding can be dangerous and damaging. Six inches of moving water can knock a person off his or her feet; 12 inches of water flowing at 10 miles per hour carries the force of a 100 mile-per-hour wind, although the force would be distributed differently on obstacles.

Dams and Levees

There are 74,053 dams in the United States, according to the 1993-1994 National Inventory of Dams. Approximately one third of these pose a "high" or "significant" hazard to life and property if failure occurs. Structural failure of dams or levees creates additional problems of water velocity and debris.

Steep Topography

Steep topography increases runoff water velocity and debris flow. Lack of vegetation to slow runoff is another factor. Alluvial fans, making up twenty to thirty percent of the Southwest region, show these characteristics and face the additional complication of shifting drainage patterns and erosion.

Cold Climatic Conditions

Apart from snowmelt, 35 northern States face flooding problems associated with ice jams. In the Spring, ice breaks away and then collects at constriction points in rivers and streams (i.e., bends, shallows, areas of decreasing slope, and bridges); by trapping water behind it and then later giving way, an ice jam heightens flood levels both upstream and downstream. Ice jams occur in the Fall with "frazil ice" (when a swift current permits formation of ice cover, but ice is carried downstream and attaches to the underside of ice cover there) and in Winter when channels freeze solid.

Identifying Hazards

A jurisdiction's susceptibility to floods--riverine floods, ice jam floods, debris jam floods, flash floods--will in most cases be a matter of historical record, as will flood elevations. (However, planners must be alert to development upstream or extensive paving over of the ground that used to absorb runoff.) The NWS maintains a list of communities with potential flash flood problems, and stream flow data for large watersheds is kept by the USGS in cooperation with State and local agencies. Results of the Corps of Engineers' dam survey, as well as subsequent work done by many States, should be available to permit plotting of dams with an evaluation of the risk they pose. Planners have access to the National Flood Insurance Program's (NFIP) Flood Insurance Rate Maps (FIRM) and Flood Hazard Boundary Maps (FHBM), USGS topographic maps, and soil maps prepared by the Soil Conservation Service to use as base maps.

Estimating Vulnerable Zones

Using the NFIP's maps and Flood Insurance Studies (FIS) as a base, the planning team--consulting with an engineer for technical analysis--should plot dams and levees as applicable, then adjust inundation levels behind levees and progressively downstream of the dam. Where ice jams are a problem, base flood fringe boundaries should be broadened to account for higher potential flood elevations. Also, despite shallow flood elevations, it is important to map alluvial fans as high risk areas. Note, too, that areas prone to flash flooding from small streams and drainage ways may not always have been mapped as such by the NFIP. See FEMA 116, *Reducing Losses in High Risk Flood*

Hazard Areas: A Guidebook for Local Officials for discussion of models and additional bibliography.

Flooding and Dam Failure Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendices for flooding and dam failure. It also identifies the unique and/or regulatory planning considerations that should be examined by the planning team and used, as appropriate, when preparing appendices for flooding and dam failure.

Direction and Control

The extent of the initial response will depend on warning time, which varies with the cause of the flooding and the distance a jurisdiction is from the origin of the flooding. Intense storms may produce a flood in a few hours or even minutes for upstream locations, while areas downstream from heavy rains may have from 12 hours to several weeks to prepare. Flash floods occur within six hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching, but floods from snowmelt can take months to develop.

The EOPs of jurisdictions located downstream of a heavy flood source should address the following planning considerations in one or more appendices to a direction and control annex:

Floodfighting

Relevant floodfighting considerations include:

- Obtaining and keeping current a list of all dams in or near the jurisdiction, by location and name.
- Coordination with a dam's staff during disaster or disaster threat situations to facilitate expeditious notification and the exchange of information.
- Maps that identify the likely areas to be inundated by flood waters.
- Identification of potential locations for the placement of temporary levees and inclusion of this information on the appropriate maps.

- Obtaining a labor force to perform flood fighting tasks associated with building a levee (e.g. fill and place sand sandbags to prevent flooding).

- Obtaining assistance from the U.S. Army Corps of Engineers to build temporary emergency levees.

Search and Rescue

Conduct aerial and waterborne search and rescue once flooding occurs. Include provisions for the rescue of stranded animals and the disposal of dead ones.

Continuity of Operations

Address the relocation of government resources, vital records, and equipment to assure continuation of services and to prevent damage or loss.

Inspection and Condemnation

Structures left standing may still have been weakened by water pressure and debris flows. Building interiors will be filled with mud and filth, and some building materials will be waterlogged.

Therefore, it will be necessary to inspect buildings and other structures to determine whether they are safe to inhabit after a flood has occurred. Activities may include:

- Identifying buildings and structures that may threaten public safety.

- Designating those buildings and structures that may be occupied.

- Identifying/marking those buildings and structures that are to be condemned.

Warning

The NWS is responsible for most flood warning efforts in the United States. For large river systems, hydrological models are used by River Forecast Centers. For many--not all--smaller streams, the NWS has developed a system called ALERT (Automated Local Evaluation in Real Time) that does not rely on volunteer observers. However, some communities may still need to use volunteer observers to monitor water levels, the effectiveness of the levee system, or even to back up automated systems. The following planning considerations should be addressed, if appropriate, in one or more appendices to a warning annex:

Automated Warning

Include a listing that identifies location and telephone numbers for all automated dam and river warning devices within or upstream of the jurisdiction, if available.

Use of Volunteers

If the jurisdiction relies on a volunteer warning network an appendix should describe:

- Composition and locations of each team in the network.
- How and when the network teams are activated (e.g., automatically with an NWS flood watch or as directed by the Emergency Manager).
- The type of information to be reported and the frequency of reporting.
- The means established to facilitate reporting.
- How warning information is passed on to response organization members.
- How the warning data received will be disseminated as emergency public information.

Dam Failure

In jurisdictions that are vulnerable to flooding from dam failure, an appendix should include provision for:

- Alerting the Warning Coordinator and other key members of the emergency management staff when the local authorities receive notification that a problem exists or may occur at the dam.
- Disseminating emergency warning information (to the public and other key response personnel) received from the dam's emergency management staff. Typically, a warning message should address a serious situation that could develop (alert) or inform the audience when an excessively high runoff occurs or a dam failure threatens (warning).
- Coordinating with the PIO to facilitate the timely warning of the

population at risk from dam failure.

Emergency Public Information

Public information begins with communication of risks to the community, to potential home buyers, and to applicants for construction permits. Knowledge of being in a flood zone, of being downstream of a dam, of being protected by an inadequate levee, and the like, may rivet attention on the rest of the public information strategy. The population should be educated about what the levels of warning imply, should know how to interpret a predicted flood level as it relates to their property, and should be informed about expedient loss-reduction measures they can apply to their property.

Provisions must be made to prepare and disseminate notifications, updates, and instructional messages as a follow-up to the original warning. The following planning considerations should be addressed, if appropriate, in one or more appendices to an EPI annex:

When Floods Develop Slowly

For flood emergencies that develop slowly enough to permit evacuation, provide the public information and instruction on:

- Expected elevation of the flood waters, and instructions on when to evacuate.
- Where to obtain transportation assistance to evacuate.
- Designated travel routes and departure times.
- Status of road closures (what routes must be avoided due to probable inundation).
- What to take or not to take to shelters (including options available for companion animals).
- Location of mass care shelters and other assistance centers.

Transition to Recovery

As the initial response shifts to recovery, provide residents returning to their homes information on safety precautions associated with:

- Sanitary conditions.
- Unsafe drinking water.
- Use of utilities.
- Electric fields created in water by downed power lines.

Evacuation

If fast- and slow-developing floods are possible in a jurisdiction, protective action decisions must be based on the estimated time necessary for evacuation and the availability of shelter space above the estimated flood elevation. When complete evacuation is not feasible, citizens need to know where high ground is; when evacuation is feasible, planning should have accounted for routes facing possible inundation. In evacuation planning for floods, consideration must be given not only to critical facilities and custodial institutions but also to recreational areas prone to flooding, whether because the site is physically isolated or because visitors isolate themselves from communication.

Particular attention should be paid to critical facilities that are low-lying or in the path of projected debris flows. Transportation routes subject to flooding should also be noted, given the potential impact on evacuation and relief efforts.

The following planning considerations should be addressed, if appropriate, in one or more appendices to an evacuation annex:

- Maps that detail probable flood inundation areas and designated evacuation routes.
- Pickup points and government provided transport to move evacuees.
- Provisions for moving the residents of custodial facilities (hospitals, jails, mental health facilities, nursing homes, retirement homes, etc.).
- Coordination and implementation of mutual aid agreements with adjacent jurisdictions to facilitate evacuation.

Mass Care

The following planning considerations should be addressed, if appropriate, in one or more appendices to a mass care annex:

Space/ Capacity

Relevant considerations include:

- Identification of a sufficient number of mass care facilities to accommodate the estimated number of people that may be evacuated.
- Availability of shelter space for a prolonged (up to 90 day) period.

Safe Location of Facilities

This involves designating shelters for use that are located on high ground (beyond the worst case inundation estimates).

Health and Medical

The following planning considerations should be addressed, if appropriate, in one or more appendices to a health and medical annex:

- Provisions to keep people informed of the health and sanitary conditions created by floods: flood waters may carry untreated sewage, dead animals, disinterred bodies, and hazardous materials.
- Monitoring water quality and sanitary conditions.

Resource Management

The following planning considerations should be addressed, as appropriate, in one or more appendices to a resource management annex:

- Provisions for purchasing, stockpiling or otherwise obtaining essential flood fighting items such as sand bags, fill, polyethylene sheeting, and pumps (of the right size and type, with necessary fuel, set-up personnel, operators, and tubing/pipes).
- Resource lists that identify the quantity and location of the items mentioned above, as well as points of contact (day, night, and weekend) to obtain them.

Attachment C
Hazardous Materials

Given the technical nature of the HAZMAT threat, it is essential that the National Response Team's NRT-1, *Hazardous Materials Emergency Planning Guide*, and the Environmental Protection Agency's (EPA) *Technical Guidance for Hazard Analysis* be used as the principal source documents for addressing HAZMAT planning needs. Other helpful guides include the *Handbook of Chemical Analysis Procedures*, co-published by the Department of Transportation (DOT), EPA, and FEMA, and the planning section of the *Guidelines for Public Sector Hazardous Materials Training*, coordinated by FEMA under an agreement with DOT. The planning team should use the guides and this attachment to help facilitate the completion of the hazard analysis and to identify unique planning requirements that should be addressed in the EOP.

The Hazard

Working Definition of Hazardous Materials

Definition of a risk area for hazardous materials depends on defining "hazardous materials." Many Federal laws and regulations exist to help the planner do just that; however, since the various lists overlap and serve different purposes (identifying acceptable quantities for "wastes" and "pollutants," reportable quantities for "emergency releases," etc.), this chapter will use the term "hazardous materials" in a broad sense to include:

- Explosive, flammable, combustible, corrosive, oxidizing, toxic, infectious, or radioactive materials
- that, when involved in an accident and released in sufficient quantities,
- put some portion of the general public in immediate danger from exposure, contact, inhalation, or ingestion.

Off-site planning for radiological accidents at nuclear power plants is addressed in Tab 1 to Attachment F. Radiological protection planning for the nuclear conflict threat is addressed in Tab 2 to Attachment F. Planning for the release of lethal unitary chemical agents and munitions is addressed in Attachment E.

For a discussion of the different lists of hazardous materials, see EPA's A Review of Federal Authorities for Hazardous Materials Accident Safety, *Chapter*

4. Note that substances not on these lists may still be hazardous.

Risk Areas

Areas at risk for hazardous materials transportation incidents lie along highways, rail lines, pipelines, rivers, and port areas. A large number of States also are potentially involved with nuclear waste incidents, given the routing for shipments. Jurisdictions with facilities that produce, process, or store hazardous materials are at risk, as are jurisdictions with facilities for the treatment, storage, or disposal of hazardous wastes. These risks are compounded by natural hazards (e.g., earthquakes, floods) or, for highway transportation of hazardous materials, poor weather conditions. In addition, other kinds of facilities (e.g., for natural gas) may contribute to risks posed by hazardous materials facilities.

Locating Hazardous Materials

This section discusses information made available to planners under Federal law. States and localities may have additional or more stringent information requirements, and planners may wish to check with their State Emergency Response Commission (SERC), State Environmental Protection Agency, State Department of Transportation, Public Service Commission, Radiological Health Division of the State Health Department, and the like for additional information. Area Committees established under the auspices of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and the Oil Pollution Act (OPA) may provide additional resources in identifying areas at risk from a hazardous materials incident.

At Fixed Facilities

EPCRA, or Title III of the Superfund Amendments and Reauthorization Act (SARA), requires facilities to notify the SERC and LEPC if they have present any of the substances designated by the EPA as an "extremely hazardous substance" when the amount on hand exceeds the EPA-defined "threshold planning quantity." Facilities must submit to the appropriate LEPC, local fire department, and SERC a list of the "hazardous chemicals" (as defined by the Occupational Safety and Health Administration, or OSHA) on site in excess of threshold quantities or the OSHA-required material safety data sheets (MSDS) on each of these chemicals. In addition, facilities must provide the appropriate LEPC, local fire department, and SERC with an inventory form containing general, aggregate ("Tier I") information on amounts of the chemical present at the facility and their location, or (upon a request made to the facility by the LEPC, fire department, or SERC) more specific ("Tier II") information. LEPCs

may complete the general picture of the fixed facility hazard by obtaining data from EPA's Toxic Chemical Release Inventory and by reviewing previous notifications of accidental releases of "hazardous substances" in excess of "reportable quantities" (as defined in 40 CFR 302). Interviews with facility emergency coordinators, fire and law enforcement personnel, and news reporters also may be used to obtain needed information.

On Transport Routes

The LEPC is entitled to information from facilities subject to SARA Title III that may be necessary for emergency planning, and the LEPC is required by SARA Title III to address routes for transportation of extremely hazardous substances in emergency planning. Facility emergency coordinators may provide information on frequency of shipments, form and quantity of shipments, and routes. Representatives of trucking, rail, air freight, and shipping industries also may assist. Planners should know of State and local route designations for hazardous materials shipments. Information is available from the Department of Energy (DOE) or the Nuclear Regulatory Commission on nuclear waste shipment routes, and from DOT on the routes for and volume of shipments involving "highway route controlled quantities" (HRCQ) of radioactive material.

Estimating Vulnerable Zones

Having plotted the location of facilities and transportation routes with the potential for hazardous materials incidents, planners can estimate vulnerable zones. The widest area of vulnerability would be for an airborne release. For airborne releases of acutely toxic chemicals, vulnerable zones would be plotted as circles around facilities--given uncertainty about wind direction--and as corridors along land transportation routes. Calculating the radii for these circles and corridors depends on knowing what concentration represents a "level of concern" for health effects, the quantity of material likely to be released, the likely rate of release, physical state of the material, elevation at which the release occurs, wind speed, and surrounding topography or construction. In determining vulnerable zones, planners will want to use both worst case and more probable scenarios for the potential releases. Planners should take advantage of any hazard assessments completed by facilities themselves, as these can provide valuable information.

> *The Risk Management Program under the Clean Air Act, Section 112(r), will require facilities to conduct hazard assessments for a selected list of about 140 toxic chemicals. The facilities are not required to have completed these hazard assessments until May 1999.*

Determining Vulnerability

Once vulnerable zones have been plotted, planners can assess the possible consequences of potential hazardous materials incidents. In particular, planners should look at what critical facilities (e.g., hospitals, utilities and treatment plants, broadcast stations, police and fire stations, emergency operating centers) lie within the vulnerable zones; they should also note what facilities house people with special evacuation needs (e.g., schools, prisons, hospitals and nursing homes). SARA Title III requires identification of facilities subject to additional risk due to their proximity to facilities that may release hazardous materials. Beyond the facility level, planners should consider the demographics of the population in the area (particularly with regard to age and language use) and the potential for property damage in the zone. They should also note the potential for contamination of drinking water supplies and other environmental consequences. The vulnerable facilities, bodies of water, and other features should also be shown on a vulnerability map.

Assessing Risk

Finally, planners will want to estimate the probability of incidents and the severity of their consequences, in order to focus preparedness and prevention efforts. Probability estimates may be simply qualitative (i.e., "low," "medium," or "high"); in any case they can be based on the historical record of releases and incidents, on general transportation accident statistics for roads (and for airports and railways), on fault tree analyses or hazard operability studies shared by facilities, as well as on professional opinion. SARA Title III requires the LEPC to identify facilities (e.g., for natural gas) that, due to their proximity to facilities that may release hazardous materials, may contribute to risk; these should be considered in assessing risk. Potential consequences may be estimated from case studies of the worst incidents involving particular hazardous materials.

Hazardous Materials Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendix for hazardous materials. It also identifies many of the unique and/or regulatory planning considerations that should be examined by the planning team and used, as appropriate, when preparing appendices specific to hazardous materials. Note that, whatever the HAZMAT planning provisions adopted by the jurisdiction, SARA Title III requires that HAZMAT emergency planning include training programs and schedules for response and medical personnel, as well as methods and

schedules for exercising the provisions.

Direction and Control

For this hazard, OSHA's Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910) requires that *an* ICS be used for on-scene management of response activities. A description of ICS is provided in Attachment A to Chapter 5. SARA Title III requires a community's plan to include the designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan.

Response Actions

Response actions are triggered when the organization that is responsible for managing HAZMAT response operations is notified. Response is initiated when an incident or accident report is received from an operations center in a facility that stores, manufactures, or uses hazardous materials or when a police officer, fireman, or member of an emergency services organization is informed of an emergency situation involving HAZMAT. SARA Title III requires HAZMAT planning to address methods for determining the occurrence of a release and the area or population likely to be affected, procedures for timely notification of the community emergency coordinator by facility emergency coordinators, and methods and procedures to be followed in response to a release.

Therefore, provisions should be made, as appropriate, to describe the on-scene management structure and address the following planning considerations in one or more appendices to a direction and control annex:

- Identify and designate special technical experts (chemists, toxicologists, occupational health physicians, etc. to augment the response organization. Where appropriate, private sector response organizations (chemical manufacturers, commercial cleanup contractors, etc.) should be part of the response organization.

- Notify response organizations, public officials, and appropriate local and State organizations that are directly involved in the response.

    - From the initial incident report, disseminate as much information as possible.

- If possible, identify the hazardous material involved and the severity (degree of threat to people, property, environment, etc.) of the accident before exposing response personnel to possible health hazards.

  – For transportation accidents information sources include placards, container labels, cargo manifests, and shipping papers. These items provide initial information that can be checked against the *North American Emergency Response Guidebook*; shipping papers should also include an emergency contact number. Also, if the above information is not visible or available, an interview with the vehicle operator could provide the information needed.

  – For fixed facility accidents, this information should be readily available from the responsible party.

➢ Initiate a response to the situation in accordance with the jurisdiction's ICS concept of operations for responding to HAZMAT accidents. Critical actions to address include:

- Upon arrival at the incident site, identifying the IC and notifying the EOC of the identity of the IC and the location of the ICP.

- Ensuring response personnel have and don the appropriate protective gear (clothing and breathing apparatus).

- Ensuring response personnel approach the incident site from upwind and obtain the following information, if not already known:

  – The time of the release.

  – The quantity released.

- Characteristics of the immediately endangered area (e.g., body of water or dense residential/commercial district nearby).
- Color and odor of vapors (if readily noticeable), and any health effects noted.
- Direction and height of any vapor cloud or plume (observed and computer-projected).
- Weather and terrain conditions.
- Entry of material into the environment (water, drains, soil).
- Action already initiated by personnel at the scene.

- Ensuring unnecessary people at the site are moved away (in a crosswind direction) and denied entry. For transportation incidents, the *North American Emergency Response Guidebook* contains recommended initial isolation zone distances for substances with poisonous vapors that are not burning and additional instructions in case of fire.
- Establishing a Protective Action Zone, if necessary. This is an area in which people can be assumed to be at risk of harmful exposure, and in need of either in-place protective shelter or evacuation.
- Containing the hazardous material. For liquids, it may be necessary to use ditches or dikes to contain spread, so that removal may take place later. It also may be necessary to cover some materials with tarps to prevent vapors from rising.

Additional Notifications

Various Federal laws and regulations on hazardous materials require notifications from the responsible party (employer, transporter, facility manager)--not necessarily from local or State agencies. Local and State

agencies may establish their own reporting requirements as well. The following are typical notifications jurisdictions may be responsible for or interested in ensuring:

- *Chemical Releases*. Notification should be made to the National Response Center by the responsible party. Legal provisions also may exist for notification of specific State and local authorities.

  - *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).* For hazardous substances identified in the CERCLA list, a release that equals or exceeds the reportable quantity (as defined in 40 CFR 302) must be reported to the National Response Center.

  - *Emergency Planning and Community Right-to-Know Act (SARA Title III).* Releases of Extremely Hazardous Substances (under section 302 of the Act) or of CERCLA hazardous substances must be made known to the SERC and the LEPC's community emergency coordinator by the facility owner or operator. In a transportation accident, this requirement is satisfied by contacting 911 or, if 911 is unavailable, the local telephone operator.

  - *Clean Water Act*. For hazardous substances (as listed in 40 CFR 116.4) released into water in excess of reportable quantities (established in 40 CFR 117.3), dischargers must make an immediate report to the National Response Center. Notification must also be made to the Nuclear Regulatory Commission if radioactive material spilled in a waterway exceeds the reportable quantity.

- *General Transportation Accidents.* Notifications are as above. In addition, the *North American Emergency Response Guidebook* recommends contacting the Chemical Manufacturer's Association's Chemical Transportation Emergency Center (CHEMTREC) with initial requests for assistance.

- *Involving Radioactive Materials*. Typically, notification should be made to the State Department of Public Health so that detection and monitoring can take place. For incidents involving nuclear weapons, notification should be made to the nearest military base and to the Joint Nuclear Accident Coordinating Center (JNACC).

- *Involving Infectious (Etiological) Agents.* Local and/or State health departments should be notified. Officials in these departments have the responsibility for notifying the Emergency Response Coordinator for the CDC.

Reentry to Areas Directly Affected by the HAZMAT Release

Address the types of detection devices and systems that will be used to determine when a toxic cloud has cleared a particular area and if the concentration of the hazardous material in soils, drinking water, and sewage systems are at a safe enough level to permit return. Also address concerns such as:

- Control of access to the area until it is safe. Only those people directly involved in emergency response operations should be allowed to enter.

- Arrangements for ongoing site control, monitoring of the environment, and compliance with State and Federal regulations regarding disposal of the wastes.

- Protocol for determining the appropriate time to allow evacuees and the general public to re-enter the area.

Decontamination and Cleanup

Relevant actions to be addressed are:

- Establish "zones" for controlling contamination (hot zone, transition zone, and clean zone).

- Provide for handling and disposal of:

  - Contaminated soil, water, and other items that could not be adequately decontaminated.

- Contaminated clothing.

Request for Federal Assistance

If the situation exceeds the capability of the responsible State and local authorities, assistance can be obtained through the National Response Center. In accordance with the NCP, upon receiving notification, the National Response Center notifies the appropriate Federal On-Scene Coordinator (OSC), who monitors private and State actions, provides support and advice, and may intervene to direct operations in rare instances when the situation exceeds the capability of the responsible party or State and local government (or when the "responsible party" would be the Department of Defense (DOD) or DOE). Assistance may include support by the National Strike Force, including strike teams for oil spill response and a Public Information Assistance Team; Radiological Emergency Response Teams; salvage teams; scientific support coordinators; and other specialized resources.

For peacetime radiological emergencies, the Federal Radiological Emergency Response Plan (FRERP) provides a mechanism for DOE to dispatch Radiological Assistance Program (RAP) teams in response to a State request for monitoring assistance.

Warning

SARA Title III requires that HAZMAT emergency planning address procedures for timely notification to the public that a release has occurred; this depends on facilities making immediate notification to State and local authorities. HAZMAT accidents generally occur without warning, and the speed at which events develop and effects spread varies from incident to incident. For small-scale occurrences, public notification may be made door-to-door, through mobile public address systems, or with portable megaphones. For larger-scale occurrences, a jurisdiction-wide warning system should be used. The following considerations should be addressed, if appropriate, in an appendix to a warning annex:

- If used, description of and responsibility for activating a HAZMAT warning system and its mode of operation (how it is activated, where located, number of warning devices (sirens, horns, whistles, etc.) in the system.

- How **timely** warning information will be disseminated to the public, including immediate notification to local and State authorities.

Emergency Public Information

The flow of accurate and timely emergency information is critical to the protection of lives and property immediately following a HAZMAT release. This section deals with the provisions that should be included in the plan for the preparation and dissemination of notifications, updates, and instructional messages as a follow-up to initial warning. The following planning considerations should be addressed, if appropriate, in one or more appendices to an EPI annex:

- Informing the public of health hazards associated with the HAZMAT involved in the accident.

- Providing personal protective actions instructions, including:

  - Survival tips for people on what to do immediately after a HAZMAT release has occurred.

  - Instructions for in-place protection (when to stay, where to stay, and what to do) when that option is chosen.

  - Event-specific evacuation instructions and information (routes, road closures, available transportation) when that option is chosen.

Note that LEPCs also will be working toward ensuring that area residents are informed of risks in the area, of first aid measures and in-place protective actions they can take, and of what to do if an evacuation is ordered in response to a hazardous materials incident.

Evacuation

SARA Title III requires HAZMAT emergency planning to address evacuation, including provisions for a precautionary evacuation and alternative traffic routes. Hazardous materials evacuation planning is little different from evacuation planning in general. The most important difference is that initial movements should be crosswind. Another difference is that some transportation incidents

may involve "selective evacuation" of a small area. The IC's authority to order such an evacuation should be clarified in the appendix, and provision should be made for the necessary coordination with the jurisdiction's EOC.

The following planning considerations should be addressed, if appropriate, in one or more appendices to an evacuation annex:

- Maps that identify primary and alternate evacuation routes for risk zones around locations that present a significant threat to the public.

- Pickup points and government provided transport to move evacuees.

- Provisions for moving special needs population (residents of custodial facilities such as hospitals, jails, mental health facilities, nursing homes, retirement homes, etc.) in a HAZMAT situation.

- Tracking extent of evacuations ordered by the IC(s) during response operations.

Evacuation may not be always necessary or advisable: **In-place protection** may be the preferred option. For some chemical hazards, using wet towels and shutting off air circulation systems may suffice; sometimes the cloud may move past more quickly than the evacuation can be effected. Also, if the hazardous materials incident results from another hazard event (such as an earthquake or a flood), any protective action decision will have to factor in additional concerns. If appropriate, an appendix or tab should be prepared that outlines the criteria that will be used to determine when to rely on in-place protection instead of evacuation to protect the public at risk. The following concerns should be addressed:

- Health risks (respiratory and skin) associated with duration of exposure.

- Speed of onset and persistence of the HAZMAT.

- Use of barriers (overhead protection, closing windows and doors, seeking shelter in home basements, etc.) to reduce exposure.

Mass Care

Any HAZMAT appendix to a mass care annex should address the location of shelters, to be upwind and/or out of range of the release. (In-place protective actions might be taken.)

Health and Medical

The following planning considerations should be addressed, if appropriate, in one or more appendices to a health and medical annex:

- Provisions for keeping people informed of the health risks created by a HAZMAT release.
- Designation of medical facilities that:
  - Have the capability to decontaminate and medically treat exposed persons.
  - Dispose of contaminated items (clothing, medical supplies, and other waste material).
- Monitoring of water quality and sanitary conditions in the areas affected by the HAZMAT release.
- Provisions for continued medical surveillance of personnel performing decontamination tasks (including radiological monitoring, if appropriate).

Resource Management

SARA Title III requires HAZMAT emergency planning to include a description of emergency equipment and facilities in the community and at each facility in the community subject to Title III, along with identification of persons responsible for the equipment and facilities. The following planning considerations should be addressed, as appropriate, in one or more appendices to a resource management annex:

- Provisions for purchasing, stockpiling or otherwise obtaining essential HAZMAT response items such as spare or replacement protective gear for response personnel, detection devices and sampling equipment (for water, soil, etc.), decontamination supplies, etc.

- Provisions for identifying agencies and contractors that could be involved in cleanup operations and related tasks (including storage, cleaning, and reconditioning of response equipment and supplies).

- Resource lists that identify the quantity and location of the items mentioned in the first bullet, above, along with points of contact (day, night, and weekend).

Attachment D
Hurricane

The Hazard

Nature of the Hazard

The term "hurricane" describes a severe tropical cyclone and sustained winds of 74 miles per hour (mph) or greater that occurs along the Gulf or East Coasts, in the Caribbean, or in the Pacific along the west coasts of Mexico and California or near Hawaii. Tropical cyclones in other areas of the world will have different names (e.g., typhoon).

The hurricane season runs from the first of June until the end of November. Yet hurricanes have occurred in every month of the year.

Hazard Agents

The primary hazard agents associated with a hurricane are the high, sustained winds; flooding from storm surge or heavy rains; battering from heavy waves; and a variety of secondary hazards:

- *High Winds*. The high winds impose significant loads on structures, both direct wind pressure and drag, and tend to propel loose objects at high velocity.

- *Flooding*. The hurricane can cause many different types of flooding. Along the coast the flooding may occur from storm surge, wind-driven water in estuaries and rivers, or torrential rain. The flooding can be still water flooding or velocity flooding caused by wave action associated with wind driven water along the coast. The rainfall associated with a hurricane is on the order of 6 to 12 inches, with higher levels common. The rain may precede landfall by hours and may persist for many hours after landfall, causing severe flooding.

- *Heavy Waves*. The storm may generate waves up to 25 feet high. These can batter the coastline, causing devastating damage to the shoreline itself and to structures near the shore. The velocity of the water moving back and forth undermines the foundations of building and piers by removing the soil from around them. Debris driven inland by

the waves can cause severe structural damage;

persons exposed to the moving water and debris are likely to receive severe injuries.

- *Secondary Hazards*. Hurricanes can also cause numerous secondary hazards. Tornadoes and electric power outages are common. Contamination of water supplies, flooding of sewage treatment facilities, and even dam failure may occur.

Estimating the Force of Hurricanes

The Saffir-Simpson scale is a widely recognized and accepted practical tool planners rely on to estimate the destructive forces associated with hurricanes. This scale classifies hurricanes into five categories based on wind speed and describes the destructive forces caused by wind, storm surge, and wave action for each category. The categories are listed below.

Hurricane Category	Wind Speed (mph)
1	74-95
2	96-110
3	111-130
4	131-155
5	156+

A copy of the Saffir-Simpson scale is located at the end of this attachment, as Table 6-D-1. It should be used to obtain detailed information on each storm category.

Risk Area

To determine the risk area, each jurisdiction's planning team in the hurricane high-risk States should use the Hurricane Evacuation Technical Data Report, if available; FISs and FIRMs; and other local information sources such as maps and historical data on previous hurricanes and other storms that have caused injuries and/or loss of life, property damage, and disruption of essential services.

Assessment of Risk

A vulnerability assessment should be prepared. The assessment identifies the population, facilities, property, land area, etc. that are vulnerable to the hazard agents associated with a hurricane. The assessment provides the planning team

the essential data it needs to determine the **hurricane category** for which the jurisdiction should prepare. **It is vital that the team plan for the highest category of hurricane that is likely to strike the jurisdiction.** The assessment should:

- Include a narrative description that identifies the parts of the jurisdiction that are subject to flooding caused by a storm surge. Also, maps that pictorially display this information.
- Identify the population at risk.
- Identify essential services (fire, police, utility substations/plants, etc.) and special custodial facilities at risk (hospitals, nursing homes, jails and juvenile correction facilities, etc.).
- Identify government resources such as essential equipment, tools, stockpiles, vital records, etc., that may need to be moved to a safe location.
- Identify facilities that must be evacuated such as trailer parks, campgrounds, etc.

Hurricane Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendix for hurricanes. It also identifies many of the unique and/or regulatory planning considerations that should be examined by the planning team and used, as appropriate, when preparing hurricane-specific appendices.

General: Response Schedule

For this hazard a Hurricane Response Schedule is used in each of the hazard-specific appendices to describe the emergency response actions that should be accomplished when responding to a hurricane. The schedule establishes phases for the approaching hurricane, describes the activities to be completed during each phase, and sets the priority for the activities to be completed. Each phase covers a discrete period of time and details the specific actions that should be completed during the phase.

Time Phases

Usually, phases correspond to hours before the estimated time of arrival of gale/hurricane force winds, immediate response actions after landfall of hurricane force winds, through termination of all response activities. Typical phases include:

- *Awareness*. 72-60 hours before the arrival of gale force winds (32-63 mph).
- *Stand-by*. 60-48 hours before the arrival of gale force winds. It is likely that a tropical storm watch would be issued during this period.
- *Response*. 48 hours before arrival of gale force winds through termination of the emergency. Hurricane watches and warnings would be issued by the NWS during this period.

Keying Actions to Time Phases

Each phase in the schedule:

- Describes actions to be taken in the phase.
- Identifies the official responsible for the action.
- Defines the hours needed before arrival of gale force winds to carry out the activity.
- Describes the priority of the action to be taken.
- Contains other critical information that tasked organizations need to perform their assigned responsibilities.

Direction and Control

Initial actions are started before the beginning of the awareness phase when it appears likely that a specific storm could threaten the jurisdiction. They continue through the response phase. Therefore, provisions should be made, as appropriate, to address the following planning considerations in one or more appendices to a direction and control annex:

- Determine when response organizations should:
  - Be placed on stand-by, partial activation, or full activation.

- Suspend or curtail day-to-day functions and services and focus on emergency response tasks.

➢ Ensure response organizations can continue to perform assigned operational tasks throughout all three phases (e.g. secure, disperse, or relocate operations centers, vehicles, equipment, vital records, and other essential resources).

➢ Determine timing for taking action on the following critical concerns:

- Alerting the public.
- Closing schools and businesses.
- Restricting access to the risk area.
- Opening mass care facilities.
- Ordering an evacuation.

➢ Assign specific tasking to each response organization for each phase. Critical concerns include:

- Decision for and timing to:
  - Initiate coordination and implement mutual aid agreements with other jurisdictions.
  - Suspend non-emergency government services and operations.
  - Release non-emergency government employees from work.
- Reporting status/observations to the EOC.

Warning

Since hurricanes are typically slow-moving storms, sufficient warning time will be available to allow those people at risk to evacuate and find a safe place to stay before the storm reaches land.

The following provisions for notifying the public should be addressed, if appropriate, in one or more appendices to a warning annex.

- Roles and responsibilities of government spokespersons during each phase.
- Coordination with the NWS and media representatives to ensure timely and consistent warning information is provided.

Emergency Public Information

This section deals with the provisions that should be made to prepare and disseminate notifications, updates, and instructional messages to follow up on the initial warning.

The following planning considerations should be addressed, if appropriate, in one or more appendices to an EPI annex:

- Instructions for preparing homes/businesses (inside and outside) to weather the storm.
- Hurricane-specific survival tips for those who choose not to evacuate (e.g., remember that the eye of the storm is not the end of the storm).
- Instructions on implementing any hurricane-specific provisions for evacuation (e.g., when and where to go).
- Locations of mass care facilities that have been opened.

Evacuation

Where available, hurricane evacuation studies conducted by the States, the U.S. Army Corps of Engineers, the National Hurricane Center, and FEMA should be used to obtain vital evacuation planning data. The information gained from such studies and the risk assessment should be used to develop the planning instructions that will be relied upon to carry out an evacuation for those people at risk. These planning instructions detail the time-phased actions to be taken to evacuate people and relocate, if practical, essential services, special custodial

facilities, and government resources from the risk area. All actions must be completed before the landfall arrival of gale force winds.

The following planning considerations should be addressed, if appropriate, in one or more appendices to an evacuation annex:

- Identifying specific evacuation zones. These zones delineate the natural and manmade geographic features of the areas(s) to be evacuated.

- Designating evacuation routes for each zone.

- Estimating the number of people requiring transportation support to evacuate the risk area.
- Specifying the clearance times needed to conduct a safe and timely evacuation under various hurricane threats. Consider the following complications that could impede or delay evacuation before finalizing the time-phased actions:

    - Heavy rains and localized flooding may slow traffic movement.

    - Bridge approaches may flood before evacuation can be completed.

    - Evacuees will need time to close up their homes and businesses, secure their boats, gather the essentials (medicines, food, clothing, etc.) to take with them, fill their vehicle with gas, etc.

    - Special custodial facility managers will need time to mobilize their staff, close up the facility, and make the necessary arrangements to move the resident population.

    - Traffic entering the evacuation zone to secure homes, businesses, boats, etc.

    - Evacuees from other jurisdictions passing through the zone and occupying the same evacuation route(s).

- The need for special modes of transportation (ferries and air transport) to evacuate people from barrier islands.

Mass Care

The following planning considerations should be addressed, if appropriate, in one or more appendices to a mass care annex:

Location of Mass Care Facilities

These safety considerations should be addressed:

- Ensure the facilities designated for use are located outside of the Category 4 storm surge inundation zone.
- Ensure the facilities are located outside of the 100 or 500 year floodplain, as deemed appropriate.
- Ensure the facilities are not vulnerable to flooding due to dams or reservoirs that overflow.

Structural Survivability

Ensure each facility designated for use has been certified as capable of withstanding the wind loads specified by the American Society of Civil Engineers or the American National Standards Institute guidelines. If it is necessary to use uncertified facilities, ensure that a structural engineer knowledgeable of the criteria contained in the guidelines cited, identifies and ranks the facilities that offer the best protection available.

Resource Management

The following planning considerations should be addressed, if appropriate, in one or more appendices to a resource management annex:

- Provisions for purchasing, stockpiling, or otherwise obtaining essential hurricane response items such as ice machines, water purification systems, polyethylene sheeting, sand bags, fill, pumps (of the right size and type, with necessary fuel, etc.), generators, light sets, etc.
- Resource lists that identify the quantity and location of the items mentioned above, as well as points of contact (day, night, and weekend) for obtaining them.

Attachment E
Lethal Unitary Chemical Agents and Munitions

Public Law 99-145, Section 1412, directs DOD to dispose of the lethal unitary chemical agents and munitions stored at eight Army installations within the continental United States. After an exhaustive study comparing the alternative disposal strategies, the Army issued a Final Programmatic Environmental Impact Statement (FPEIS) for the Chemical Stockpile Disposal Program (January 1988) recommending on-post incineration at each site. In the February 1988 Record of Decision (ROD), the Army committed to establishing an emergency response program as a means of mitigating accidents during storage and for disposal operations.

In August 1988, the Army and FEMA signed a Memorandum of Understanding (MOU) identifying the specific responsibilities of the Army and FEMA, defining areas of each agency's expertise, and outlining where cooperation between the two agencies would result in a more efficient use of personnel and material resources. These obligations were integrated into a program called CSEPP. The Army has overall responsibility for developing on-post preparedness plans, upgrading on-post response capabilities, conducting on-post training and has the lead for technical research, post-incident cleanup standards and data automation activity. FEMA is responsible for working with State and local governments in developing off-post preparedness plans, upgrading off-post response capabilities, and conducting off-post training.

The chemicals weapons depots affect ten States and their emergency planners. However, chemical munitions, many still containing chemical agents, have been found in old dump sites, current and former military installations, old industrial sites, and at spurious unappreciated non-stockpile locations throughout the United States. It is possible that State and local planners could be contacted by the Army or FEMA to prepare short-term operations plans to address these situations. The information which follows should be helpful in responding to emergencies caused by these non-stockpile munitions.

The Hazard

Nature of the Hazard

The chemical agents of primary concern to CSEPP are the nerve agents GA, GB and VX, and the vesicant (blister) agents H, HT and HD. The chemical and physical properties of these agents have a direct bearing on emergency planning and response because they determine the agents' volatility, behavior in fires, and persistence in the environment. All of the agents are liquids at normal indoor temperatures, although most sulfur mustards (H and HD) freeze at ambient temperatures below 55 to 59^{o} F. In the unlikely event of fires or

explosions, on-post personnel and the off-post general public also could be exposed to agent combustion products as well as uncombusted agents.

The agents GA, GB, and VX are rapidly acting, lethal nerve agents and are toxic as liquids and vapors. The vesicant agents injure the eyes, damage the lungs and severely blister the skin upon exposure. The vesicants often react with tissue constituents, and there is significant evidence that exposure to sufficiently high doses may increase the risk of developing cancer. The vesicant agents are potent in minute quantities and can produce delayed effects as late as 24 hours after contact.

In pure form, the nerve agents are usually odorless, colorless (agent VX may be pale amber), and tasteless. GA and GB are nonpersistent nerve agents which primarily present a vapor hazard. The vapors from these agents would be the primary cause of casualties since they can be carried downwind quickly. Under most release and meteorological conditions GA and GB produce the greatest downwind hazard distance when compared to other agents in the stockpile. VX is not very volatile, so it presents much less vapor hazard than GA and GB; however, it is 100 times more toxic by the percutaneous route. In practical terms, a toxic dose of VX is more likely to result from skin rather than respiratory exposure; however, all nerve agents are sufficiently volatile to pose an inhalation hazard. At agent concentrations of 30 mg/m3 or greater, median lethal inhalation doses can be attained in a few minutes.

The chemical agents are stored in three basic configurations: (1) projectiles, cartridges, mines, and rockets containing propellant and/or explosive components; (2) aircraft-delivered munitions that do not contain explosive components; and (3) steel one-ton containers. Most of the stockpile (61%) is in this third form. All of the agents are at least 20 years old; some are more than 40 years old.

Risk Area

The stockpiled agents are stored in chemical exclusion at eight U. S. Department of Army installations within the continental United States (all percentage figures are based on weight): Tooele Army Depot (TEAD), Utah (42.3% of the total stockpile); Pine Bluff Arsenal (PBA), Arkansas (12.0%); Umatilla Depot Activity (UMDA), Oregon (11.6%); Pueblo Depot Activity (PUDA), Colorado (9.9%); Anniston Army Depot (ANAD), Alabama (7.1%); Aberdeen Proving Ground (APG), Maryland (5.0%); Newport Army

Ammunition Plant (NAAP), Indiana (3.9%); and Blue Grass Army Depot (BGAD), Kentucky (1.6%). The remaining 6.6% of the stockpile is located on Johnston Island in the Pacific Ocean.

For CSEPP, the EPZ concept involves three concentric zones, reflecting the differing response requirements associated with a fast-breaking chemical event with limited time for warning and response. The innermost planning zone is the immediate response zone (IRZ), the middle zone is the protective action zone (PAZ), and the outermost zone is the precautionary zone (PZ).

Emergency response plans must reflect the fact that a release of chemical agent will affect different areas in different ways and at different times. Areas near the point of release are likely to experience relatively high concentrations of agent very quickly, while areas farther away are likely to experience lower agent concentrations after a longer period of time.

Prompt and effective response is most critical in the IRZ because it would be the first affected by an accidental release of chemical agent and would likely receive the heaviest agent concentrations. This zone encompasses an area requiring less than one-hour response time when affected by an agent release under "typical" weather conditions. The IRZ boundary ranges from 10 to 15 km (6 to 9 miles) from the potential chemical event source, depending on the stockpile location on-post. For these reasons, emergency response plans developed for the IRZ must provide for the most rapid and effective protective actions possible.

The PAZ is an area that extends beyond the IRZ to approximately 16 to 50 km (10 to 30 miles) from the stockpile location. The PAZ is that area where public protective actions may still be necessary in case of an accidental release of chemical agent, but where the available warning and response time is such that most people could evacuate. The primary emergency response is evacuation because it is anticipated that there will be sufficient time to permit an orderly and complete evacuation. However, other responses (e.g., sheltering) may be appropriate for institutions and special populations that could not evacuate within the available time.

The PZ is the outermost portion of the EPZ and extends from the PAZ outer

boundary to a distance where the risk of adverse impacts to humans is negligible. Because of the increased warning and response time available for implementation of response actions in the PZ, detailed local emergency planning is not required, although consequence management planning may be appropriate.

CSEPP Planning Considerations

The *CSEPP Planning Guidance Document* provides information to be used in preparing emergency plans that cover the most important aspects of CSEPP. Developed jointly by FEMA and the Army, the CSEPP Planning Guidance serves three principal purposes in the CSEPP:

- To promote the development of a comprehensive emergency response capability at each chemical agent stockpile location by providing guidance and direction to assist State, local, and Army installation planners in formulating, coordinating, and maintaining effective emergency response plans;

- To ensure that critical planning decisions are made consistently at all eight chemical agent stockpile locations by establishing a single adequate and systematic framework for emergency response planning related to the CSEPP; and

- To provide a basis for assessing the adequacy of emergency preparedness planning as a part of the evaluation of proposals for Federal assistance.

The CSEPP Planning Guidance does not contain all of the information and detailed technical criteria that will eventually be required for comprehensive emergency plans and resource programs at the eight stockpile locations. Additional location-specific and programmatic technical guidance is available in a number of technical studies, either completed or ongoing.

The CSEPP planning process involves a number of important tasks: identify the planning team; identify sources of technical and administrative support for the planning team; review existing plans to determine their status, to prevent

overlap, and to eliminate inconsistency; analyze local hazards, determine risk, and assess vulnerability; evaluate response capabilities and resources; upgrade existing plans or develop new plans and procedures; and develop an ongoing program for plan implementation, maintenance, training, and exercises.

Direction and Control

The following are direction and control concerns associated with this particular hazard and the CSEPP.

Chemical Event Assessment

Chemical event assessment involves determining the type and nature of an incident or accident and its potential or actual impact. Assessment is both initial and extended. Initial assessment (conducted by installation personnel) primarily involves activities such as analysis and monitoring; agent identification and classification; dispersion modeling and dose projection; and conversion of assessment information to emergency response considerations. Extended monitoring activities will be determined by the nature of the accident and release.

Emergency Notification and Event Levels

Army and local officials must identify the type and detail of information that the installation must communicate to the off-post authorities to assist the latter in deciding upon protective actions. Such information includes, but is not limited to, name of communicator; verification number (if commercial telephone is used) or authenticator; time of notification; emergency level; time of event; brief description of event; projected areas of impact; meteorological data; and a recommendation for the implementation of protective actions. Transmission of a hard copy of this information should follow as soon as possible. There are significant benefits in a standard emergency assessment and notification system at each Army installation. Four event levels have been established in CSEPP, with increasing degrees of impact: Non-Surety Emergency; Limited Area Emergency; Post Only Emergency; and Community Emergency.The Army installation will notify the designated off-post point(s) of contact of the actual or likely occurrence, its chemical event emergency notification level, and the recommended protective action within 5 minutes from initial detection of an actual or likely chemical agent release at APG, ANAD, BGAD, NAAP, and PBA, and within 10 minutes from initial detection of an actual or likely release at PUDA, TEAD, and UMDA.

Emergency

Because the chemical agent stockpile is under Federal jurisdiction, the National

Operations Plan

Contingency Plan delegates the responsibility for on-scene coordination to the DOD. Therefore, the Federal OSC will be an Army representative. If the release of a chemical agent results in the declaration of Federal emergency or disaster, FEMA also will be involved through its Federal Coordinating Officer (FCO). Each jurisdiction's command and control procedures should include consideration of the relationship between the OSC and the civilian emergency management structure.

In this context, each jurisdiction must identify the organizational structure it will use to respond to a chemical agent release. Key components of the structure include:

- The individual (and alternates) with authority to provide central management of the community's emergency response.
- Other parties that will support the management function by providing advice and information.
- The response forces and other resources available to respond to the emergency (including those under direct control of the jurisdiction as well as those to be obtained from other governments or from private sources).
- The organizational framework that will be used to coordinate the input of all parties to ensure an effective and comprehensive response to the emergency.

Emergency Operations Center

An EOC developed under the CSEPP should provide a command and control center for potential emergencies related to the storage and disposal of the chemical agent stockpile as well as for other potential emergencies identified in the community's hazard assessment. An effective EOC consists of the combination of physical facilities, equipment, personnel, and procedures that enables the jurisdiction to apply its resources efficiently and effectively to respond to an emergency situation. Detailed guidelines for staffing, organization, and operation of the EOC are presented in the CSEPP Planning Guidance.

Emergency Worker Operations

CSEPP takes a two-pronged approach to advancing the safety of civilian emergency response personnel. First, no civilian workers will be intentionally placed in positions where they will encounter chemical agent during the performance of their duties. Second, workers who may incidentally encounter chemical agent while performing their duties will be provided with appropriate protective clothing, equipment, and training.

Under these guidelines, civilian responders will not enter any area where chemical agent is known or suspected to be present while the release of agent is ongoing. While the release is in progress, civilian emergency workers may perform duties (such as traffic and access control and emergency medical services) outside the known/suspected hazard area. After the release has stopped and chemical agent monitoring has confirmed that agent concentrations are within the range for which the protective clothing and equipment provide protection, civilian responders may enter the hazard area to perform necessary duties such as search and rescue and accompanying off-site Army monitoring personnel. All personnel whose duties during or after the release may bring them into contact with chemical agent will be required to use protective clothing and equipment specified in these guidelines.

Automation

Automated systems can provide important assistance in performing many of the planning and response functions in CSEPP. The quickness with which a chemical agent release could affect on-post and off-post populations argues strongly in favor of using automated tools to help perform complex analyses during planning and to manage the deployment of personnel and resources during response. State and local jurisdictions are strongly encouraged to make maximum use of automation tools being developed for CSEPP.

Communications

Reliable communication systems ensure the notification and subsequent information sharing can occur without delay. In CSEPP, at least two independent methods of simultaneous communications must be available to protect against the possibility of equipment failure. A communications network, consisting of redundant telephone and radio systems, should be designed and installed to link the Army installation EOC and notification point with the EOCs and notification points of all IRZ counties and the State(s). Regardless of whether the telephone or radio system is designated the primary method of communication, the other system must be provided to serve as a backup.

Warning

The objectives of the public alert and notification system (ANS) are:

- To alert essentially every person within the IRZ of an emergency that has the potential of causing harm to those persons.
- To notify essentially every affected person within the IRZ of appropriate protective actions.

The IRZ warning system must provide both an alerting signal and instructional message within 8 minutes from the time a decision has been made that the public is in danger. To achieve rapid notification, CSEPP endorses the concept of a dual indoor-outdoor warning system.

Outdoor Systems

Only omnidirectional electronic sirens with voice message capability are acceptable as the primary outdoor alerting and notification devices for CSEPP. The network of siren/voice units is configured so that the alert signals and notification messages received in each area of the IRZ are of sufficient volume to be heard distinctly above ambient noise levels in the area. Community characteristic descriptions, with their associated sound pressure level requirements, are identified in the CSEPP Planning Guidance.

Indoor Systems

An acceptable indoor alert and notification device must be reliable and not be easily disabled. CSEPP supports several options: tone alert receivers, NOAA Specific Area Message Encoder (SAME) receivers, and EAS-capable receivers. Two supporting technologies to augment the receivers include simultaneous telephone activations and interruption of cable television programming for special announcements.

PAZ

Alert and notification for the population in the PAZ is provided by a system designed for specific applications such as population centers and institutions, coupled with electronic media, EAS broadcasts, and route alerting. Public alert and notification system requirements within the PAZ should be viewed as transitioning between the exacting requirements for the IRZ to basically no requirements for the PZ.

Emergency Public Information

CSEPP encourages an aggressive public education and information campaign as an essential ingredient of an effective emergency preparedness program. The pre-emergency public education program raises public awareness of the hazards associated with the chemical agent stockpile and advises citizens of

actions they can take, both before and during an emergency, to reduce risks to themselves and their property. Public education also informs individuals of the progress of Chemical Stockpile and Chemical Demilitarization activities as they relate to emergency preparedness. The emergency public information program identifies the information that will need to be communicated to the public in the event of a chemical agent release and a strategy for disseminating this information rapidly.

CSEPP endorses the use of a single JIC as the most efficient method for gathering, coordinating and disseminating emergency information. Each jurisdiction will develop agreements and procedures, in cooperation with all affected local jurisdictions, State emergency management officials, and the Army installation, that will be followed to ensure the coordinated release of information during an emergency. A related task for JIC personnel is the control of rumors.

Evacuation and In-Place Sheltering

The basic protective action choices are evacuation and four types of shelter-in-place including normal shelter-in-place, and sheltering improved by expedient measures, permanent enhancements, or pressurization.

Protective Action Decision-Making

The protective action decision process consists of these steps:

- Identifying the situations under which evacuation would not be appropriate.
- Determining what action provides the best protection when evacuation is inappropriate.
- Evaluating the situation at the time of an emergency to determine whether evacuation or the alternative action should be implemented.

To ensure quick and appropriate emergency response, the first two steps are determined during emergency planning along with a process designed for accomplishing the third step.

Protective Action Decision Table

Emergency planners analyze the interaction of accident categories, as defined by the EPG (Emergency Planning Guide), and population characteristics to identify the protective actions that would be appropriate for different segments of the population under different accident categories. The results of this analysis are

classified into a set of protective action strategies. Each strategy lists the protective action recommended for the population of each area and for each special population and institution under a given set of release and meteorological conditions. Each protective action strategy is concisely summarized in table form.

Evacuation Planning Requirements

CSEPP requires planners to identify the optimum evacuation strategy for each area of the EPZ and all special populations (including any on-post personnel) for which evacuation has been identified as a possible protective action by using a quantitative evacuation time study. This includes an analysis of:

- The number of people and vehicles to be evacuated compared with capacities of the roadways that can be used for the evacuation.

- The number and location of people without access to automobiles compared with the supply of mass transportation vehicles that can be made available.

- The number and location of persons with special evacuation needs (e.g., the disabled) compared with the availability of personnel and vehicles with the capability to meet those needs.

In-Place Sheltering Planning Requirements

Communities are required to develop a detailed sheltering-in-place plan for each of the four sheltering strategies. The plan will identify all structures to be used as shelters and will describe the program the jurisdiction will pursue to implement the given strategy in these structures. The plan will determine the resources necessary to implement the protection strategy in all affected structures and present a checklist of actions that inspectors will consider for reducing infiltration in each structure.

The community will develop the capabilities to, assign responsibilities for, and ensure the availability of resources to:

- Notify people in appropriate areas to implement expedient shelter-in-place.

- Determine (in consultation with the Army installation) when the shelters should be abandoned.
- Advise people in selected areas to abandon their shelters without risking the inappropriate abandonment of shelters in other areas.
- Ensure prompt evacuation of all people who have been advised to leave their shelters.

Access Control

Access control points (ACP) will be pre-designated to allow the immediate dispatch of personnel and commitment of resources. Access control for a chemical event affecting off-post areas also will be necessary if the Army creates a National Defense Area (NDA) off the installation. Off-post law enforcement officials may be needed to assist on-post security personnel in this event. The creation of an NDA permits the Army to use military forces to effectively control non-Federal lands or areas when necessary for reasons of national security.

Evacuee Support

The two primary components of an evacuee support system in CSEPP are reception and mass care. Reception is the process of receiving and registering evacuees, determining their needs (i.e., medical, housing, family reunification, etc.) and assigning them to appropriate resources. Mass care includes providing shelter, food, family reunification, limited medical care, and social services for evacuees. Reception and mass care facilities may be collocated when a small number of evacuees are involved. Separate reception and mass-care facilities are appropriate in a larger-scale evacuation.

Health and Medical

Health and medical concerns associated with the hazard and CSEPP include the following:

Decontamination

Decontamination is an integral part of the treatment of people contaminated with chemical agent. This must be done quickly following exposure. Regardless of the type of chemical agent involved, personal decontamination can be performed by flushing undiluted household bleach on all contaminated areas (except the face) and rinsing off with lukewarm, soapy water. This can be done by the individual who is contaminated, another person or by a decontamination team. CSEPP stresses the importance of self- and buddy-decontamination because of the critical time factors in performing this task.

CDC Medical Guidelines

The CDC of the U.S. Department of Health and Human Services have prepared recommendations for medical preparedness for CSEPP civilian communities and have published these recommendations in the Federal Register (60 FR 33308, June 27, 1995).

➢

Resource Management

A chemical agent event is an unusual emergency requiring certain special response and resource allocations not normally associated with more common emergencies such as floods, windstorms, or some hazardous materials accidents. For this reason, planning for resource coordination and allocation becomes especially critical and should be coordinated with respect to planning zones and their related protective actions.

Critical to implementing the resource management components of the EOP in CSEPP are the automation systems. The objectives of the CSEPP automation system are to:

- Store, manage, and access databases to support planning efforts.
- Interface databases with analytical planning tools and models.
- Provide automation support for daily, weekly, monthly, and yearly planning tasks (e.g., reporting, scenario development, training, exercise planning).
- Organize emergency plan concepts and standard operating procedures.
- Provide rapid access to information and pre-authorized implementation procedures to support command and control and protective action decisions.
- Facilitate effective communication and alert/notification.
- Track and log events.
- Provide a means of effectively managing emergency response resources.

Attachment F
Radiological Hazards

Radiological materials have many uses and serve a very important purpose in our country. Some of their most common uses include:

- Use by doctors to detect and treat serious diseases.
- Use by educational institutions and companies for research.
- Use by the military to power large ships and submarines.
- Use by companies in the manufacture of products.
- Use as a critical base material to help produce the commercial electrical power that is generated by a nuclear power plant.
- Use as one of the critical components in nuclear weapons, which are relied upon to help deter the threat of war.

Under extreme circumstances an accident or intentional explosion involving radiological materials can cause very serious problems. Consequences may include death, severe health risks to the public, damage to the environment, and extraordinary loss of, or damage to, property.

This attachment focuses on the unique and regulatory planning requirements associated with the two radiological hazard threats that pose the most significant risks to a community:

- An accident at a nuclear power plant, and
- Nuclear conflict with one or more nations that may be hostile to the United States.

The description of the hazard and both radiological and direct weapons (blast, fire) effects in Tab 2 to this attachment apply also to the threat of nuclear terrorism. That is, the same effects and consequences would be associated with the "intentional" detonation of a nuclear device or weapon by a terrorist group seeking to maximize the blast, fire, and radiological effects.

Planning for response to transportation accidents that involve the accidental spread or release of

radiological waste materials is addressed in the Attachment C, Hazardous Materials. See also FEMA-REP-5, *Guidance for Developing State, Tribal, and Local Response Planning and Preparedness for Transportation Accidents.*

Tab 1 to Attachment F
Nuclear Power Plant Accident

Given the regulatory considerations associated with planning for response to a nuclear power plant accident, it is essential that NUREG-0654/FEMA-REP-1, Rev. 1, its supplements, and FEMA Guidance Memoranda be used as the primary source documents for addressing the planning needs associated with this hazard. The information in this attachment complements the planning guidance cited above and is intended to help facilitate the identification of the necessary planning considerations that should be addressed if the jurisdiction chooses to include this hazard in its all-hazard EOP.

The Hazard

Nature of the Hazard

Radioactive materials are produced in the operation of nuclear reactors. The accidental release of these materials into the atmosphere can harm people and damage the environment.

Risk Area

The risk area associated with accidents at a fixed commercial nuclear power reactor is divided into two specific geographic areas called EPZs. EPZs define the areas for which planning is needed to ensure prompt and effective actions are taken to protect the health and safety of the public if an accident occurs. Although in theory an EPZ is a circle centered on the power plant, the size and actual shape of each EPZ will be determined by the characteristics of a particular site (e.g., topography, identifiable landmarks, etc.).

The plume exposure pathway (10-mile EPZ) includes everything within approximately a 10-mile radius of the power plant. Human health and safety risks associated with it include: whole body injury from exposure to gamma radiation; and thyroid, lung, and possibly other organ injury from inhalation of radioactive materials.

The ingestion exposure pathway (50-mile EPZ) includes everything within approximately a 50-mile radius of the power plant. Human health and safety risks associated with it include whole body and thyroid injury from ingestion of radiologically contaminated water and food.

Environmental concerns associated with both EPZs include contamination of:

- People.
- The water supply.
- The crops and feed that people, domesticated animals, and wildlife consume.
- The livestock and milk or milk products that people consume.
- The areas people occupy (i.e. where they work, live, play, etc.).

Nuclear Power Plant Accident Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendix for nuclear power plant accidents. It also identifies many of the unique and regulatory planning considerations that should be examined by the planning team and addressed, as appropriate, when preparing nuclear power plant accident hazard-specific appendices.

Direction and Control

For this hazard, four emergency classification levels (ECL) have been established. These ECLs describe the specific emergency actions that must be accomplished by the licensee and off-site emergency response organizations. As the emergency situation escalates from a small on-site problem to an emergency with off-site implications, each of the emergency classification levels provides for a gradual expansion of response actions as the situation warrants. The four levels are: 1) Notification of Unusual Event, 2) Alert, 3) Site Area Emergency, and 4) General Emergency, this last being the most severe.

Jurisdictions located in the 10- and 50-mile EPZs should include in their EOPs the appropriate tasking for response organizations to accomplish the response actions required by each of the emergency classification and action levels. When more than one jurisdiction is located in the same EPZ it is necessary for the jurisdictions to work together to sort out the response tasking each jurisdiction will perform.

The State is responsible for specifying the protective measures for the public and response personnel for both the plume exposure and ingestion pathway EPZs.

Provisions should be made, as appropriate, to address the following planning considerations in one or more appendices to a direction and control annex:

- Describing the specific responsibilities assigned to the jurisdictional response organizations located in both EPZs. Typical tasks include:
  - Preparation of written agreements that specify the concept of operations and specify the response roles of Federal agencies and of State, local, and private sector response organizations located in the EPZ.
  - Provisions for sending a member from the emergency response organization to the licensee's near-site Emergency Operations Facility to serve as a liaison officer, if needed.
  - Requirement to:
    - Identify radiological laboratories that can be used to provide radiological monitoring and analyses services.
    - Identify nuclear and other facilities, organizations, and individuals that can provide resources or skills that can be relied upon to support the response effort.
    - Provide the personnel and equipment to perform off-site radiological monitoring.
    - Inspect, inventory, and operationally check radiological detection equipment and instruments at least once each calendar quarter and after each use.
    - Make rapid assessments of the actual or potential magnitude and locations of radiological hazards caused by a nuclear power plant accident.

- Quantify the dose rate and the gross radioactivity measurements for the isotopes specified in NUREG-0654/FEMA REP-1, Rev.1, Table 3.

- Make arrangements with State or Federal agencies to locate and track the airborne radioactive plume.

➢ *Tasking applicable to jurisdictional response organizations located in the plume exposure pathway EPZ.* Address:

- Provisions to accomplish field monitoring.

- The means that will be used to detect and measure radioiodine concentrations in the air (down to 10^{-7} microcurie per cubic centimeter).

- Provisions for determining the best protective options and measures (evacuation, sheltering, etc.) for the people in the risk area during emergency conditions.

- Provisions for traffic management and control of access to the affected area.

- Post-event actions to be taken by emergency response personnel, as soon as environmental conditions and safety considerations permit. These include:

  - Provisions for relaxing the protective measures that have been implemented.

  - Means to be used for determining the appropriate time to allow evacuees and the general public to leave mass care facilities (if used) and return to their homes.

➢ *Tasking applicable to the jurisdictional response organizations located in the ingestion pathway EPZ.* Normally, the State

emergency management organization will be primarily responsible for the response planning required for this EPZ. An appendix to the State or local EOP (as appropriate) must address the provisions that have been made:

- To detect contamination.
- For implementing procedures that will protect the public and prevent them from consuming contaminated foodstuffs. Protective actions may include impoundment, decontamination, processing, weathering, and product replacement/substitution.
- To prepare maps that can be used to record survey and monitoring information applicable to farm crops, livestock, soil samples, dairies, food processing plants, water sheds, water supply intake and treatment plants, and reservoirs. The maps must include all of the activities cited above that are located in the 50-mile EPZ.

➢ *Requests for Federal assistance*. In order to accurately quantify the potential long term health and environmental consequences of an accident, sophisticated monitoring equipment and scientific analytical techniques are needed. Such equipment and technical expertise usually are not maintained by State and local governments. Accordingly, provisions for requesting Federal agency resources (those available through the FRERP) to meet this need should be included in a tab to the hazard-specific appendix.

Communications Provisions must be made to ensure the State and local EOCs have a communications link with the nuclear facility and the facility's near-site Emergency Operations Facility, if manned.

Warning The nuclear facility licensee is responsible for notifying off-site local and State government response organizations in those jurisdictions that may be affected when an emergency occurs.

The following jurisdictional responsibilities for planning should be addressed in one or more appendices to a warning annex:

Public Warning

Warning of the public is a critical function related to this hazard. The public must be given timely instructions with regard to the specific protective actions to be taken. These instructions should describe the area(s) affected and address evacuation, sheltering in place, etc., as appropriate to the situation and time available. Further, the means chosen to accomplish the warning must ensure public health and safety.

Adjacent Jurisdictions, State(s), and the Federal Government

Provisions should be made for notifying and coordinating with every jurisdiction and level of government located within the 10- and 50-mile EPZs. Also, local jurisdictions should contact their State EOC to confirm that they have been notified by the licensee. The State EOC should alert the FEMA Regional Office.

Emergency Public Information

This section deals with the provisions made to prepare and disseminate notifications, updates, and instructional messages to follow up on the initial warning information passed to the public located within the plume exposure pathway.

The following planning considerations should be examined and addressed in one or more appendices to an EPI annex:

- The procedures and means that will be relied upon to notify and warn the public (including residential, custodial, and transient populations).
- Instructions for the immediate protective actions to take (e.g., close windows and doors, stay indoors, shut off the heating and cooling system, etc.).
- Evacuation instructions for evacuees (what to take, what to do about pets and livestock, when to leave, evacuation routes, etc.).
- Locations of mass care facilities (also called "congregate care" facilities) and associated reception centers.

Evacuation

The jurisdictions located in the plume exposure pathway should use the

population information gained from the risk assessment as a starting point to develop the planning that will be relied upon to carry out an evacuation of people at risk. The range of time between the onset of accident conditions and the start of a major release of radiological materials into the atmosphere may range from a few minutes to several hours, and may affect what protective action needs to be taken. Once a release has started, it may continue for several days. Critical to the evacuation decision are the type of radiological hazard that is threatening the public, conditions at the power plant, time available to implement an evacuation, and the protective measures called for in the State's plan. In all cases the protective actions taken must be consistent with the EPA protective action guide regarding human exposure to the passage of a radioactive airborne plume.

The following planning considerations should be addressed, as appropriate, in one or more appendices to an evacuation annex:

- Identifying specific evacuation zones. These zones delineate the natural and manmade geographic features and boundaries of the risk area(s) to be evacuated.

- Preparing maps that show the specific evacuation routes for each zone, identify the preselected radiological sampling and monitoring points, and show the location of mass (or "congregate") care facilities that may be used to shelter evacuees.

- Maps showing the population distribution around the nuclear facility.

- Provisions for protecting the population residing in a health care or police custodial facility, or are otherwise confined and who cannot be evacuated.

- Coordinating with adjacent jurisdictions and facilities located outside of the boundaries of the plume exposure pathway EPZ to facilitate evacuation.

- Provisions for contacting the sight- and hearing-impaired.

Mass Care The following planning considerations should be addressed, as appropriate, in

one or more appendices to a mass care (or "congregate care," as it is also called in radiological emergency planning) annex:

- Ensure facilities designated for use by the evacuated public are located at least 5 miles, and preferably 10 miles beyond the boundaries of the plume exposure pathway EPZ.

- Operate reception centers to monitor, decontaminate, and register evacuees, and to monitor/decontaminate their vehicles and possessions.

- Ensure a sufficient number of facilities are available to meet the anticipated demand for shelter.

- If facilities are to be located outside of the jurisdiction's boundaries, coordinate with the adjacent jurisdiction(s) to arrange space for evacuees.

- Ensure those responsible for monitoring and decontamination have the necessary equipment and are familiar with procedures for accomplishing these tasks.

- When and as appropriate, identify sites for provision of mass care services to include:

  - Distribution of food, water, ice, clothing, etc.

  - First aid/medical treatment, if needed.

  - Temporary housing, if needed.

Health and Medical

The following planning considerations should be addressed, as appropriate, in one or more appendices to a health and medical annex:

- Provisions for determining the exposure risks and dispersal of radiological contamination.

- Identification of medical facilities capable of receiving injured people who are contaminated.

- Provisions to estimate the amount of exposure the population in the risk area has received.

- Provisions/procedures for determining when it would be appropriate to obtain (from the State Health Department) and administer radioprotective drugs to emergency workers and individuals (e.g. institutionalized people) who were not able to get out of the plume exposure pathway risk area, as well as the general population. These procedures must address the conditions under which these drugs would be administered and identify who will be responsible for making the decision for the use of radioprotective drugs.

- Provisions for emergency personnel:

  - To determine, record, and maintain the daily and accumulated dose they receive.

  - To receive self-reading dosimeters and permanent record devices.

- Guidelines for authorizing workers to incur radiation exposure in excess of limits established by the EPA.

- Provisions to radiologically decontaminate workers, equipment, and supplies.

- Provisions for disposal of contaminated items (clothing, medical supplies, and other waste items).

- Provisions for the medical treatment and ongoing medical evaluation of victims and workers that have been exposed to radiological hazards.

Resource Management

The following planning considerations should be addressed, as appropriate, in one or more appendices to a resource management annex:

- Ensure radiological survey instruments and direct-reading dosimeters that can be used to detect and measure gamma radiation are available and that members of the mass care facility management team can operate them.

- Prepare resource lists that identify the type, quantity, and location of radiological equipment by category (protective equipment, monitoring equipment, and decontamination supplies) maintained by the jurisdiction.

Tab 2 to Attachment F
Nuclear Conflict

The Hazard

Nature of the Hazard

The possibility of a nuclear conflict involving the United States is extremely remote. Our nation's relationships with the foreign governments that possess nuclear weapons remain fluid. The scope of the nuclear conflict threat can vary from a single accidental launch or detonation by terrorists to a large scale strike against the United States.

Nuclear radiation is the major effect that is unique to nuclear weapons. The other effects differ from conventional weapons only in degree. A brief description of the weapons effects that are of concern to the planner follows.

Nuclear Radiation Effects

About half of the energy produced in the detonation of a nuclear weapon results from nuclear fission, a process in which radioactive substances are produced. When detonations occur on or near the earth's surface, the debris produced by the explosion becomes radioactive. Much of this debris is carried high into the atmosphere by the rising fireball. After the debris cools, it subsequently falls back to earth in the form of particles commonly called "fallout." The radiation emitted from these particles is called gamma radiation. The health consequences of exposure to gamma radiation include:

- *Radiation sickness*. The immediate consequence of human exposure to gamma radiation is called radiation sickness. The effects may occur within hours or days following exposure. Depending on the amount and duration of exposure, health problems range from nausea, fatigue, vomiting, diarrhea, loss of hair, hemorrhages, infections, to death.

- *Somatic effects.* Radiation injuries that may occur months to years after exposure are categorized as somatic effects. They include sterility or reduced fertility, leukemia, and other forms of cancer.

Direct Weapons

The energy released by a nuclear detonation alters the environment in several ways. In the immediate area of the detonation, the main effects are due to the

Effects blast wave, thermal pulse, and electromagnetic pulse.

- *Blast wave.* The force of wind caused by the blast wave destroys or damages structures and other objects. It propels and spreads the debris that is created by the explosion. Deaths and injuries result from people being thrown about or struck by the things that were turned into projectiles or missiles by the force of the wind associated with the explosion.

- *Thermal pulse (heat flash).* The thermal pulse ignites exposed combustible materials, causing many fires. People in the open may be severely burned by the heat from the detonation.

- *Electromagnetic Pulse*. When the radiation energy generated by a high altitude (60 miles and above) nuclear detonation interacts with the earth's atmosphere it produces low frequency electromagnetic waves. These waves are referred to as the EMP. When EMP interacts with the electric and electronic equipment components of radio and television systems, the resulting "energy surge" can cause severe damage. EMP is not a threat to most people. Only those who rely on an electrically driven life support system (e.g., pacemaker) are at risk.

Risk Area The end of the cold war and collapse of the military alliance between the Soviet Union and its allies have significantly diminished the possibility of a massive coordinated attack on the United States. Control of a significant portion of the former Soviet Union's nuclear arsenal is in the hands of several independent nations. These nations now chart their own foreign policy and are not obligated to support any military action in which the new "Russia" may become involved. There are now upwards of twenty nations that may possess the capability to use nuclear weapons. However, it is unlikely that any one of them possesses or controls a large enough stockpile of weapons to carry out the kind of massive attack on the United States that was previously envisioned.

Under the current international climate, it is unlikely that an **organized** attack on the United States would occur. However, if an attack did occur, areas potentially at risk might include:

- Military installations that **directly** support our nation's nuclear retaliatory capabilities. Such installations may include intercontinental ballistic missile launch facilities, bases that house fixed wing bombers, and those that are involved in command and control of offensive nuclear weapons.

- Large, densely populated metropolitan areas that play a significant role in support of the nation's governmental or financial management activities.

Nuclear Conflict Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a nuclear conflict hazard-specific appendix. It also identifies many of the unique planning considerations that should be examined by the planning team and addressed, as appropriate, when preparing nuclear conflict hazard-specific appendices.

Direction and Control

For this hazard it is vital for emergency response personnel to be able to detect and quantify the location and amount of gamma radiation present in the jurisdiction.

Provisions should be made, as appropriate, to address the following planning considerations in one or more appendices to a direction and control annex:

- Coordinating, when appropriate (during an international crisis, U.S. military intervention overseas, etc.) with the next level of government to obtain essential information concerning:

  - Intelligence estimate of the intent of adversary nations that possess weapons of mass destruction.

  - Appropriate increased readiness actions to take and the timing for their implementation.

- Ensuring that personnel with expertise in dealing with hazards associated with the nuclear conflict threat are assigned to work in the EOC.

Typical tasks may include:

- Advising decision makers on the scope of the radiological hazards.
- Determining when it would be appropriate to distribute radiological instruments to emergency response organizations and mass care facility management teams.
- Disseminating essential radiological information to emergency response personnel and shelter management teams.
- Analyzing radiological information reported by emergency response teams and facility managers. Then:
  - Determine the relevant exposure data of shelter occupants and personnel performing emergency response duties and ensure that this information is tracked and recorded.
  - Implement a procedure that would limit the exposure of personnel performing emergency response duties.
  - Ensure facilities and areas that must be inhabited or used by humans are monitored and decontaminated, if appropriate.
  - Ensure facilities and areas that are unsafe for human use are identified.
  - Ensure people remain sheltered (in their mass care facility or risk area shelter) until the gamma radiation hazard has passed.
  - Determine the appropriate time to allow evacuees and the general public to leave mass care facilities

.

Warning

Warning of the public is a critical function related to this hazard. Lead time is necessary to make the arrangements needed to ensure the people that are located in risk areas evacuate or seek shelter. Approximately 48 or more hours may be needed to carry out the necessary actions to ensure the public is protected from this hazard. The following planning considerations should be addressed, if appropriate, in one or more appendices to a warning annex:

- Coordination with the next level of government, when appropriate, (during international crisis, U. S. military intervention overseas, etc.) to obtain information concerning the appropriate time to disseminate warning.

- Use of a jurisdiction-wide warning system to disseminate timely warning to the public and members of the emergency response organization.

Emergency Public Information

A nuclear conflict appendix to an EPI annex should address survival tips for people living in jurisdictions vulnerable to nuclear effects who choose to shelter themselves in their homes.

Evacuation

Evacuation is the primary protective action option that should be used to protect people from this hazard. The information gained from the risk assessment should be used to develop the planning instructions that will be relied upon to carry out an evacuation of those people at risk to direct weapons effects. These planning instructions detail the time-phased actions to be taken to evacuate people and relocate, if practical, essential services, special custodial facilities, and government resources from the risk area. All actions must be completed before a nuclear detonation occurs. For this reason, a nuclear conflict appendix to the evacuation annex should address the clearance times needed to conduct a safe and timely evacuation of the population at risk.

Since a jurisdiction cannot guarantee that it will receive warning in time to evacuate fully, provisions should be made for **relocation within the risk area** of the public at risk in situations where the warning comes too late to permit evacuation. The following needs should be addressed:

- *Facilities*. Provisions should be made to:

- Identify the facilities in the risk area that:
  - Offer the best protection available.
  - Can be used to house large numbers of people.
- Use tabs to reflect key information (protection factor, capacity, cooking, sleeping, water, medical, recreational capabilities, telepone numbers, point of contact for access, etc.) associated with each facility.

➢ *Special Equipment*. Provisions should be made to:

- Move radiac meters and dosimeters (that can be used to detect and measure gamma radiation) to those facilities selected for use as shelters within the risk area.
- Ensure members of the facility management team can operate available radiological detection and decontamination equipment.
- Ensure that mass care facility management team members are assigned to work at any shelter facility to be opened within the risk area, if their facility is not scheduled to be opened.

➢ *Decontamination*. Ensure members of each facility management team are familiar with procedures for decontaminating people and the shelter.

Mass Care

The following planning considerations should be addressed, if appropriate, in one or more appendices to a mass care annex:

➢ Ensure facilities designated for use are located outside of the area vulnerable to direct weapons effects.

➢ Tabs should be used to reflect key information (protection factor, capacity, cooking, sleeping, water, medical, recreational capabilities, telepone numbers, point of contact for access, etc.) associated with

each facility.

- If facilities are located outside of the jurisdiction's boundaries, coordinate with the adjacent jurisdiction(s) to arrange space for evacuees.

- Identify mass care facilities suitable for housing custodial care groups.

- Ensure the facilities designated for use provide protection from gamma radiation to shelter occupants.

- Ensure provisions have been made regarding necessary special equipment:

  - Move radiac meters and dosimeters (that can be used to detect and measure gamma radiation) to those mass care facilities that have been selected for opening.

  - Ensure members of the facility management team can operate available radiological detection and decontamination equipment.

- Ensure members of each mass care facility management team are familiar with procedures for decontaminating people and the facility.

Health and Medical

The following planning considerations should be addressed, if appropriate, in one or more appendices to a health and medical annex:

- Provisions for determining the levels of radiation exposure of exposed people.

- Designation of facilities that:

  - Have the capability to decontaminate and medically treat people exposed to radiation.

- Dispose of contaminated items (clothing, medical supplies, and other waste items).

➢ Provisions for continued medical surveillance of personnel performing essential operational tasks.

Resource Management

The following planning considerations should be addressed, if appropriate, in one or more appendices to a resource management annex:

➢ Provisions for purchasing, stockpiling, or otherwise obtaining essential gamma radiation detection devices for use in shelters within the risk area and in mass care facilities.

➢ Provisions for purchasing, stockpiling, or otherwise obtaining the essential stocks (food, water, medical, etc.) needed to support an extended stay (3-14 days) in shelters within the risk area or in mass care facilities.

Attachment G
Terrorism

TO BE DEVELOPED

Attachment H
Tornado

The Hazard

Nature of the Hazard

A tornado consists of violent whirling wind accompanied by a funnel-shaped cloud. Usually, tornadoes are associated with severe weather conditions such as thunderstorms and hurricanes. Tornadoes are very destructive. The average width of a tornado is 300 to 500 yards. Their path may extend up to fifty miles, and the funnel cloud moves at speeds between 10 and 50 mph. The wind speed within the funnel cloud has been estimated at between 100 and 500 mph. Roughly two percent of all tornadoes are "violent" tornadoes, with wind speeds of 300 mph or more, an average path width of 425 yards, and an average path length of 26 miles. Tornado season runs from March to August in the United States, with peak activity from April to June; however, tornadoes can occur year-round.

Risk Area

Tornadoes have occurred in every State. Historically, they have been most frequent in Texas, Oklahoma, Florida, Kansas, Nebraska, Iowa, South Dakota, Illinois, Missouri, Mississippi, Louisiana, Colorado, Wisconsin, Arkansas, Georgia, North Dakota, Minnesota, Indiana, and Michigan. More than 50 percent of the land mass in the United States is within the area of significant tornado risk.

Tornado Unique Planning Considerations

This section contains a listing of the functional annexes that typically would require the preparation of a hazard-specific appendix for tornadoes. It also identifies many of the unique planning considerations that should be examined by the planning team and used, as appropriate, when preparing tornado-specific appendices.

Direction and Control

For this hazard it is essential for emergency response personnel to take immediate action, as soon as conditions permit, to gather initial damage assessment information in the area that was impacted by the tornado. This information is needed to determine the severity and extent of injuries and

damages.

High-risk jurisdictions may want to use a network of trained spotters. This spotting network would be relied on to rapidly communicate information that can be helpful to the appropriate authorities responsible for making the decision for when to upgrade from a Tornado Watch to Tornado Warning. The network can also assist in tracking the tornado's path.

This data gathering effort should provide much of the information decision makers will need to implement and prioritize response actions for: search and rescue activities; access control and re-entry to the impacted area; debris clearance; restoration of utilities and lifeline repairs; and the inspection, condemnation, and/or demolition of buildings and other structures.

Provisions should be made, as appropriate, to address the following planning considerations in one or more appendices to a direction and control annex:

Damage Assessment — Conduct of immediate ground and air surveys to determine the extent of damage, casualties, and the status of key facilities.

Search and Rescue — Use of damage assessment information to identify the facilities and areas where search and rescue operations may need to be conducted and to establish a priority for conduct of these operations. Planning should focus on the actions that need to be carried out in order to remove trapped and injured persons from homes, buildings collapses, and other structural collapses, administer first aid, and assist in transporting the seriously injured to medical facilities.

Access Control and Re-entry — Control of access to the area severely affected by the tornado until the area is safe. Only those directly involved in emergency response operations should be allowed to enter.

Debris Clearance — Actions taken to identify, remove, and dispose of rubble, wreckage, and other material which block or hamper the performance of emergency response functions. Activities may include:

- Demolition and other actions to clear obstructed roads.

- Repairing or temporarily reinforcing roads and bridges.
- Construction of emergency detours and access roads.

Inspection, Condemnation, and Demolition

Actions taken to inspect buildings and other structures to determine whether it is safe to inhabit or use them after a tornado has occurred. Activities may include:

Inspection of buildings and structures which are critical to emergency operations.

- Inspection of buildings and structures that may threaten public safety.
- Inspection of less critically damaged structures. Designate those that may be occupied and identify/mark those that are to be condemned.
- Arrangements for the demolition of condemned structures.

Warning

Warning of the public is critical for this hazard. The NWS will place areas under a Tornado Watch when conditions are particularly favorable for tornadoes and severe storms. NWS will issue a Tornado Warning when a tornado has been visually spotted or picked up on radar. Television, radio, and NOAA tone alert radio are sources of information for the public.

The following planning considerations should be addressed, if appropriate, in one or more appendices to a warning annex:

- Provision for the jurisdiction's central warning point to obtain timely Tornado Watch and Warning information (direct link to area weather stations, continuously monitor NWS and other sources, etc.).
- Provisions for notifying institutions and facilities (e.g., schools, hospitals, nursing homes, jails, prisons, shopping malls, major factories, and sporting events) that a Watch or Warning has been issued.

- Provisions for activating the jurisdiction-wide (if available) warning system to disseminate timely warning to the public and emergency response organization members that a tornado has touched down in the jurisdiction.

Emergency Public Information

The flow of accurate and timely emergency information is critical to the protection of lives and property. This section deals with the provisions made to prepare and disseminate notifications, updates, and instructional messages to follow up on the initial warning.

The following planning considerations should be addressed, if appropriate, in one or more appendices to an EPI annex:

- Survival tips for people on what to do during and immediately after a tornado. During a Tornado Watch information should be disseminated to the public on the appropriate protective actions to take if a Tornado Warning is issued (e.g., encourage people without underground shelter to seek out an interior room or hallway on the lowest floor and there to seek cover under something sturdy, like a table, etc.).

- Warnings and advice on the continuing threat of storms, unsafe areas, buildings and structures, and other hazards.

Evacuation

Evacuation is not a practical option for this hazard since the point of touchdown and the track of a tornado are unpredictable. The typical protective action option for a tornado is shelter-in-place.

Mass Care

A tornado-specific appendix is probably unnecessary, since the mass care functional annex should adequately address the immediate actions to be taken, as soon as conditions permit, in the area that was severely impacted by a tornado. Damaged houses may not be habitable; residents should be dissuaded from entering unsafe buildings and persuaded instead to seek temporary shelter.

Chapter 7
Linking Federal and State Emergency Response Operations

Introduction

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, authorizes the Federal Government to respond to disasters and emergencies in order to provide State and local governments assistance to save lives and protect public health, safety, and property. The FRP was developed to help expedite Federal support to State and local governments dealing with the consequences of large-scale disasters (see Figure 7-1). Generally, the FRP is implemented when the State's resources are not sufficient to cope with a disaster and the Governor has requested Federal assistance.

This chapter summarizes the response planning considerations that shape the content of the FRP, Regional Response Plans (RRP), and State EOPs. It also outlines the linkages between Federal and State emergency response operations for planning purposes.

Relationship - Federal (National/ Regional) Response Plans and the State EOP

Federal Response Plans and State EOPs describe each respective level of government's approach to emergency response operations. Since both levels of government provide support there are some similar and overlapping functions in the plans.

Federal Response Plan

The FRP details what the Federal Government will do to provide emergency assistance to a State and its affected local governments impacted by a large-scale disaster. It also describes an organizational structure for providing this assistance.

Concept of Operations

The FRP may be implemented after a large-scale disaster has occurred or upon warning that such a disaster is likely to occur. In either case the fundamental assumption is that the situation has exceeded or will exceed the State and local

governments' capability to respond and recover. The plan guides the activities of Federal agencies (and supporting organizations like the ARC) that are tasked to perform response and recovery actions.

Insert Figure 7-1 here

Functional Organization

The FRP uses twelve ESFs to group and describe the kinds of resources and types of Federal assistance that can be provided to augment State and local response efforts. The ESFs include: (1) Transportation, (2) Communications, (3) Public Works and Engineering, (4) Firefighting, (5) Information and Planning, (6) Mass Care, (7) Resource Support, (8) Health and Medical Services, (9) Urban Search and Rescue, (10) Hazardous Materials, (11) Food, and (12) Energy. A primary agency has been designated for each ESF. During response and recovery operations, the primary agency forms and activates a team that is responsible for working with the appropriate State and local officials to identify unmet resource needs. The team also coordinates the flow of resources and assistance the Federal Government provides to meet these needs.

The FRP serves as the foundation for the development of headquarters and regional response plans that will be relied on to implement Federal response activities.

Regional Response Plans

RRPs supplement the FRP and detail the specific regional level response and recovery actions and activities that may be taken by Federal departments and agencies to support the Federal response effort. They also provide the necessary linkage between the State EOP and the FRP. Each RRP:

- Specifies the responsibilities that are assigned to each of the tasked Federal departments and agencies for mobilizing and deploying resources to assist State(s) in response/recovery efforts.
- Describes the relationship between the responding Federal agencies/departments and their State counterparts.
- Provides information to the States on the various response mechanisms, capabilities, and resources available to them through the Federal Government.
- Includes organizational tasking and implementing instructions for accomplishing the actions agreed upon in the Region/State MOUs. The MOU is a written agreement between the Federal and State governments. The FEMA Regional Director and the appropriate State

official are the signatories. The MOU describes the working relationship and provisions that have been made to facilitate joint Federal/State operations during large-scale disasters. The following list identifies some of the typical MOU responsibilities that may be addressed in a RRP:

- Notification procedures and protocols for communicating with State officials (points of contact--State Governor, State Emergency Management Agency Director, EOC managers, etc.); means of communication (telephone, radio, teletype, e-mail, fax, etc.); frequency of contact; and message content (initial discussions on scope of the disaster, State's initial assessment of the situation, identification of liaison officers and their estimated arrival time at the State EOC, likely staging areas for Federal response teams, etc.).

- Provision for Federal Field Assessment Team (FAsT) personnel to assist in conduct of a "rapid situation assessment" immediately after a disaster has occurred or immediately prior to such an event.

- The coordination responsibilities of Regional liaison officer(s) and the provisions established for deployment to the State EOC.

- Provisions for deployment of emergency response team members to the State EOC, staging locations, or directly into the area impacted by the disaster.

- Provisions for obtaining work space in the State EOC and other locations for the initial response cadre, arrangements to obtain work space for the Disaster Field Office (DFO) and other follow-on response teams, and a variety of other activities that require extensive coordination.

State Emergency

The State emergency response mission is much broader than the Federal Government's. In addition to providing resources to satisfy unmet local needs,

Operations Plan

the State EOP addresses several operational response functions. These functions focus on the direction and control, warning, emergency public information, and evacuation actions that must be dealt with during the initial phase of response operations, fall outside of the Federal response mission, and are not appropriate for inclusion in Federal response plans. The functional planning approach suggested in Chapter 5 allows States to address those operational responsibilities. Table 7-1 shows how the functions described in Chapter 5, if adopted, may link with Federal ESFs in those emergencies that require implementation of the FRP. (Table 7-1 is at the end of this chapter, due to its length.)

However, since States do have this additional responsibility to channel Federal assistance provided under the FRP, some States choose to "mirror" the FRP functions. There is no need to mirror the Federal ESFs exactly: States have successfully used a hybrid approach, either by giving State counterparts of Federal ESFs those "extra" responsibilities appropriate to the State level, or by creating functions in addition to those used by the Federal Government in order to address State responsibilities and concerns.

The important thing is for the State's choice of functions to fit the State's own concept of operations, policies, governmental structure, and resource base. That is because the State EOP details what the **State** government will do to respond to all large-scale disaster and emergency situations that could harm people and property within the State, whether or not links to the FRP/RRP framework become necessary. The State EOP:

- Identifies the State departments and agencies that have been designated to perform response and recovery activities and specifies the tasks to be accomplished.

- Outlines the assistance that may be provided to local jurisdictions during disaster situations that generate emergency response and recovery needs beyond the jurisdiction's capabilities to satisfy.

- Specifies the direction and control and communications procedures and systems that will be relied upon to alert, notify, recall, and dispatch emergency response personnel; warn local jurisdictions; protect citizens

and property; and request aid/support from other States and/or the Federal Government (including the role of the Governor's Authorized Representative, or GAR).

- Describes the provisions that have been made to obtain initial situation assessment information from the local jurisdiction(s) that have been directly impacted by the disaster. Typically, this information provides an early assessment of:

  - The approximate number of disaster victims that have been:

    – Injured, killed, or are missing.

    – Evacuated from the area impacted by the disaster.

    – Housed in mass care facilities.

  - The damage done to lifeline systems such as hospitals, power plants, water and sanitation systems, etc.

  - The damage done to transportation networks such as airports, major roads and bridges, rail lines, ports, etc.

  - The types of assistance (food, water, medical, US&R, etc.) the jurisdiction will require to satisfy the immediate needs of disaster victims.

- Includes organizational tasking and instructions for accomplishing the actions agreed upon in the Region/State MOU. The MOU describes the working relationship and provisions that have been made to facilitate joint Federal/State operations during large-scale disasters. The following list identifies some of the typical responsibilities contained in the MOUs that may be addressed in the State EOP:

  - Provisions for notifying the FEMA Regional Office about the occurrence of a disaster or evolving emergency situation that may warrant activation of the RRP.

- Communication protocols to include means of communication, frequency of contact, and message content (e.g. warning messages, situation reports, requests for assistance, etc.).

- Provisions for requesting Federal response teams to assist the State.

  – Requesting that a FAsT be deployed to assist the State in assessing the disaster situation.
  – Designating individuals to participate as State Emergency Management Agency representatives on the FAsT.

  – Preparing a joint (FEMA/State) Preliminary Damage Assessment (PDA).

- Provisions for providing work space and communication support to the Regional liaison officers and other Federal teams deployed to the State EOC, staging areas, or the area directly impacted by the disaster.

- Provisions for designating a SCO to work directly with the FCO.

- Provisions for assisting the FCO in identifying candidate locations for establishing the DFO.

➢ Details the coordinating instructions and provisions for implementing interstate compacts, as applicable.

➢ Explains how planned operations will be logistically supported.

Glossary of Terms

Words, phrases, abbreviations, and acronyms relevant to emergency management should be defined. Many terms in emergency management have special meanings, so it is important to establish precise definitions. Such definitions allow the users of the EOP to share an understanding of the EOP.

American Red Cross	The American Red Cross is a humanitarian organization, led by volunteers, that provides relief to victims of disasters and helps people prevent, prepare for, and respond to emergencies. It does this through services that are consistent with its Congressional Charter and the Principles of the International Red Cross Movement.
Attack	A hostile action taken against the United States by foreign forces or terrorists, resulting in the destruction of or damage to military targets, injury or death to the civilian population, or damage or destruction to public and private property.
Checklist	Written (or computerized) enumeration of actions to be taken by an individual or organization, meant to aid memory rather than provide detailed instruction.
Chief Executive Official	The official of the community who is charged with authority to implement and administer laws, ordinances, and regulations for the community. He or she may be a mayor, city manager, etc.
Community	A political entity which has the authority to adopt and enforce laws and ordinances for the area under its jurisdiction. In most cases, the community is an incorporated town, city, township, village, or unincorporated area of a county. However, each State defines its own political subdivisions and forms of government.
Contamination	The undesirable deposition of a chemical, biological, or radiological material on the surface of structures, areas, objects, or people.
Dam	A barrier built across a watercourse for the purpose of impounding, controlling, or diverting the flow of water.

Damage Assessment	The process used to appraise or determine the number of injuries and deaths, damage to public and private property, and the status of key facilities and services such as hospitals and other health care facilities, fire and police stations, communications networks, water and sanitation systems, utilities, and transportation networks resulting from a man-made or natural disaster.
Decontamination	The reduction or removal of a chemical, biological, or radiological material from the surface of a structure, area, object, or person.
Disaster	An occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries. As used in this Guide, a "large-scale disaster" is one that exceeds the response capability of the local jurisdiction and requires State, and potentially Federal, involvement. As used in the Stafford Act, a "major disaster" is "any natural catastrophe [...] or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under [the] Act to supplement the efforts and available resources or States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby."
Disaster Field Office	The office established in or near the designated area of a Presidentially declared major disaster to support Federal and State response and recovery operations. The DFO houses the FCO and ERT, and where possible, the SCO and support staff.
Disaster Recovery Center	Places established in the area of a Presidentially declared major disaster, as soon as practicable, to provide victims the opportunity to apply in person for assistance and/or obtain information relating to that assistance. DRCs are staffed by local, State, and Federal agency representatives, as well as staff from volunteer organizations (e.g., the ARC).
Dose (Radiation)	A general term indicating the quantity (total or accumulated) of ionizing radiation or energy absorbed by a person or animal.
Dose Rate	The amount of ionizing radiation which an individual would absorb per unit of time.
Dosimeter	An instrument for measuring and registering total accumulated exposure to

ionizing radiation.

Earthquake The sudden motion or trembling of the ground produced by abrupt displacement of rock masses, usually within the upper 10 to 20 miles of the earth's surface.

Electromagnetic Pulse A sharp pulse of energy radiated instantaneously by a nuclear detonation which may affect or damage electronic components and equipment.

Emergency Any occasion or instance--such as a hurricane, tornado, storm, flood, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, fire, explosion, nuclear accident, or any other natural or man-made catastrophe--that warrants action to save lives and to protect property, public health, and safety.

Emergency Alert System A digital technology (voice/text) communications system consisting of broadcast stations and interconnecting facilities authorized by the Federal Communication Commission. The system provides the President and other national, State, and local officials the means to broadcast emergency information to the public before, during, and after disasters.

Emergency Environmental Health Services Services required to correct or improve damaging environmental health effects on humans, including inspection for food contamination, inspection for water contamination, and vector control; providing for sewage and solid waste inspection and disposal; clean-up and disposal of hazardous materials; and sanitation inspection for emergency shelter facilities.

Emergency Health Services Services required to prevent and treat the damaging health effects of an emergency, including communicable disease control, immunization, laboratory services, dental and nutritional services; providing first aid for treatment of ambulatory patients and those with minor injuries; providing public health information on emergency treatment, prevention, and control; and providing administrative support including maintenance of vital records and providing for a conduit of emergency health funds from State and Federal governments.

Emergency Medical Services, including personnel, facilities, and equipment required to ensure proper medical care for the sick and injured from the time of injury to the time

Services of final disposition, including medical disposition within a hospital, temporary medical facility, or special care facility, release from site, or declared dead. Further, emergency medical services specifically include those services immediately required to ensure proper medical care and specialized treatment for patients in a hospital and coordination of related hospital services.

Emergency Mortuary Services Services required to assure adequate death investigation, identification, and disposition of bodies; removal, temporary storage, and transportation of bodies to temporary morgue facilities; notification of next of kin; and coordination of mortuary services and burial of unclaimed bodies.

Emergency Operating Center The protected site from which State and local civil government officials coordinate, monitor, and direct emergency response activities during an emergency.

Emergency Operations Plan A document that: describes how people and property will be protected in disaster and disaster threat situations; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available for use in the disaster; and outlines how all actions will be coordinated.

Emergency Planning Zones Areas around a facility for which planning is needed to ensure prompt and effective actions are taken to protect the health and safety of the public if an accident occurs. The REP Program and CSEPP use the EPZ concept.

- In the REP Program, the two EPZs are:
  - *Plume Exposure Pathway (10-mile EPZ).* A circular geographic zone (with a 10-mile radius centered at the nuclear power plant) for which plans are developed to protect the public against exposure to radiation emanating from a radioactive plume caused as a result of an accident at the nuclear power plant.
  - *Ingestion Pathway (50-mile EPZ).* A circular geographic

zone (with a 50-mile radius centered at the nuclear power plant) for which plans are developed to protect the public from the ingestion of water or foods contaminated as the result of a nuclear power plant accident.

- In CSEPP, the EPZ is divided into three concentric circular zones:

  - *Immediate Response Zone (IRZ)*. A circular zone ranging from 10 to 15 km (6 to 9 miles) from the potential chemical event source, depending on the stockpile location on-post. Emergency response plans developed for the IRZ must provide for the most rapid and effective protective actions possible, since the IRZ will have the highest concentration of agent and the least amount of warning time.

  - *Protective Action Zone (PAZ)*. An area that extends beyond the IRZ to approximately 16 to 50 km (10 to 30 miles) from the stockpile location. The PAZ is that area where public protective actions may still be necessary in case of an accidental release of chemical agent, but where the available warning and response time is such that most people could evacuate. However, other responses (e.g., sheltering) may be appropriate for institutions and special populations that could not evacuate within the available time.

  - *Precautionary Zone (PZ)*. The outermost portion of the EPZ for CSEPP, extending from the PAZ outer boundary to a distance where the risk of adverse impacts to humans is negligible. Because of the increased warning and response time available for implementation of response actions in the PZ, detailed local emergency planning is not required, although consequence management planning may be appropriate.

Emergency Response Team An interagency team, consisting of the lead representative from each Federal department or agency assigned primary responsibility for an ESF and key members of the FCO's staff, formed to assist the FCO in carrying out his/her

coordination responsibilities. The ERT may be expanded by the FCO to include designated representatives of other Federal departments and agencies as needed. The ERT usually consists of regional-level staff.

Emergency Response Team Advance Element — For Federal disaster response and recovery activities under the Stafford Act, the portion of the ERT that is first deployed to the field to respond to a disaster incident. The ERT-A is the nucleus of the full ERT.

Emergency Response Team National — An ERT that has been established and rostered for deployment to catastrophic disasters where the resources of the FEMA Region have been, or are expected to be, overwhelmed. Three ERT-Ns have been established.

Emergency Support Function — In the FRP, a functional area of response activity established to facilitate the delivery of Federal assistance required during the immediate response phase of a disaster to save lives, protect property and public health, and to maintain public safety. ESFs represent those types of Federal assistance which the State will most likely need because of the impact of a catastrophic or significant disaster on its own resources and response capabilities, or because of the specialized or unique nature of the assistance required. ESF missions are designed to supplement State and local response efforts.

Emergency Support Team — An interagency group operating from FEMA headquarters. The EST oversees the national-level response support effort under the FRP and coordinates activities with the ESF primary and support agencies in supporting Federal requirements in the field.

Evacuation — Organized, phased, and supervised dispersal of people from dangerous or potentially dangerous areas.

- *Spontaneous Evacuation*. Residents or citizens in the threatened areas observe an emergency event or receive unofficial word of an actual or perceived threat and without receiving instructions to do so, elect to evacuate the area. Their movement, means, and direction of travel is unorganized and unsupervised.

- *Voluntary Evacuation*. This is a warning to persons within a designated area that a threat to life and property exists or is likely to exists in the immediate future. Individuals issued this type of waning or order are NOT required to evacuate, however it would be to their advantage to do so.

- *Mandatory or Directed Evacuation*. This is a warning to persons within the designated area that an imminent threat to life and property exists and individuals MUST evacuate in accordance with the instructions of local officials.

Evacuees — All persons removed or moving from areas threatened or struck by a disaster.

Exposure (Radiological) — A quantitative measure of gamma or x-ray radiation at a certain place based on its ability to produce ionization in air.

Exposure Rate (Radiological) — The amount of ionizing radiation to which an individual would be exposed or which he or she would receive per unit of time.

Federal Coordinating Officer — The person appointed by the President to coordinate Federal assistance in a Presidentially declared emergency or major disaster.

Field Assessment Team — A small team of pre-identified technical experts that conduct an assessment of response needs (not a PDA) immediately following a disaster. The experts are drawn from FEMA, other agencies and organizations--such as the U.S. Public Health Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and the American Red Cross--and the affected State(s). All FAsT operations are joint Federal/State efforts.

Flash Flood — Follows a situation in which rainfall is so intense and severe and runoff so rapid that it precludes recording and relating it to stream stages and other information in time to forecast a flood condition.

Flood — A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters, unusual or rapid accumulation or runoff of surface waters, or mudslides/mudflows caused by accumulation of water.

Governor's Authorized Representative	The person empowered by the Governor to execute, on behalf of the State, all necessary documents for disaster assistance.
Hazard Mitigation	Any action taken to reduce or eliminate the long-term risk to human life and property from hazards. The term is sometimes used in a stricter sense to mean cost-effective measures to reduce the potential for damage to a facility or facilities from a disaster event.
Hazardous Material	Any substance or material that when involved in an accident and released in sufficient quantities, poses a risk to people's health, safety, and/or property. These substances and materials include explosives, radioactive materials, flammable liquids or solids, combustible liquids or solids, poisons, oxidizers, toxins, and corrosive materials.
High-Hazard Areas	Geographic locations that for planning purposes have been determined through historical experience and vulnerability analysis to be likely to experience the effects of a specific hazard (e.g., hurricane, earthquake, hazardous materials accident, etc.) resulting in vast property damage and loss of life.
Hurricane	A tropical cyclone, formed in the atmosphere over warm ocean areas, in which wind speeds reach 74 miles per hour or more and blow in a large spiral around a relatively calm center or "eye". Circulation is counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.
Incident Command System	A standardized organizational structure used to command, control, and coordinate the use of resources and personnel that have responded to the scene of an emergency. The concepts and principles for ICS include common terminology, modular organization, integrated communication, unified command structure, consolidated action plan, manageable span of control, designated incident facilities, and comprehensive resource management.
Joint Information Center	A central point of contact for all news media near the scene of a large-scale disaster. News media representatives are kept informed of activities and events by public information officials who represent all participating Federal, State, and

	local agencies that are collocated at the JIC.
Joint Information System	Under the FRP, connection of public affairs personnel, decision-makers, and news centers by electronic mail, fax, and telephone when a single Federal-State-local JIC is not a viable option.
Mass Care	The actions that are taken to protect evacuees and other disaster victims from the effects of the disaster. Activities include providing temporary shelter, food, medical care, clothing, and other essential life support needs to those people that have been displaced from their homes because of a disaster or threatened disaster.
Nuclear Detonation	An explosion resulting from fission and/or fusion reactions in nuclear material, such as that from a nuclear weapon.
Public Information Officer	A Federal, State, or local government official responsible for preparing and coordinating the dissemination of emergency public information.
Preliminary Damage Assessment	A mechanism used to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and the community as a whole. Information collected is used by the State as a basis for the Governor's request for a Presidential declaration, and by FEMA to document the recommendation made to the President in response to the Governor's request. PDAs are made by at least one State and one Federal representative. A local government representative familiar with the extent and location of damage in the community often participates; other State and Federal agencies and voluntary relief organizations also may be asked to participate, as needed.
Radiation Sickness	The symptoms characterizing the sickness known as radiation injury, resulting from excessive exposure of the whole body to ionizing radiation.
Radiological Monitoring	The process of locating and measuring radiation by means of survey instruments that can detect and measure (as exposure rates) ionizing radiation.
Recovery	The long-term activities beyond the initial crisis period and emergency response

	phase of disaster operations that focus on returning all systems in the community to a normal status or to reconstitute these systems to a new condition that is less vulnerable.
Regional Operating Center	The temporary operations facility for the coordination of Federal response and recovery activities, located at the FEMA Regional Office (or Federal Regional Center) and led by the FEMA Regional Director or Deputy Director until the DFO becomes operational. Once the ERT-A is deployed, the ROC performs a support role for Federal staff at the disaster scene.
Resource Management	Those actions taken by a government to: identify sources and obtain resources needed to support disaster response activities; coordinate the supply, allocation, distribution, and delivery of resources so that they arrive where and when most needed; and maintain accountability for the resources used.
Secondary Hazard	A threat whose potential would be realized as the result of a triggering event that of itself would constitute an emergency. For example, dam failure might be a secondary hazard associated with earthquakes.
Standard Operating Procedure	A set of instructions constituting a directive, covering those features of operations which lend themselves to a definite, step-by-step process of accomplishment. SOPs supplement EOPs by detailing and specifying how tasks assigned in the EOP are to be carried out.
State Coordinating Officer	The person appointed by the Governor to coordinate State, Commonwealth, or Territorial response and recovery activities with FRP-related activities of the Federal Government, in cooperation with the FCO.
State Liaison	A FEMA official assigned to a particular State, who handles initial coordination with the State in the early stages of an emergency.
Storm Surge	A dome of sea water created by the strong winds and low barometric pressure in a hurricane that causes severe coastal flooding as the hurricane strikes land.
Terrorism	The use of--or threatened use of--criminal violence against civilians or civilian infrastructure to achieve political ends through fear and intimidation, rather than direct confrontation. Emergency management is typically concerned with the

consequences of terrorist acts directed against large numbers of people (as opposed to political assassination or hijacking, which may also be considered "terrorism").

Tornado A local atmospheric storm, generally of short duration, formed by winds rotating at very high speeds, usually in a counter-clockwise direction. The vortex, up to several hundred yards wide, is visible to the observer as a whirlpool-like column of winds rotating about a hollow cavity or funnel. Winds may reach 300 miles per hour or higher.

Tsunami Sea waves produced by an undersea earthquake. Such sea waves can reach a height of 80 feet and can devastate coastal cities and low-lying coastal areas.

Warning The alerting of emergency response personnel and the public to the threat of extraordinary danger and the related effects that specific hazards may cause. A warning issued by the NWS (e.g., severe storm warning, tornado warning, tropical storm warning) for a defined area indicates that the particular type of severe weather is imminent in that area.

Watch Indication by the NWS that, in a defined area, conditions are favorable for the specified type of severe weather (e.g., flash flood watch, severe thunderstorm watch, tornado watch, tropical storm watch).

List of Acronyms

The following are acronyms used in this Guide.

ACP	access control point
ALERT	Automated Local Evaluation in Real Time
ANS	alert and notification system
ARC	American Red Cross
ANAD	Anniston Army Depot
APG	Aberdeen Proving Ground
BGAD	Blue Grass Army Depot
CB	citizens band
CDC	Centers for Disease Control and Prevention
"CEO"	Chief Executive Official
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHEMTREC	Chemical Manufacturers' Association Chemical Transportation Emergency Center
CPG	Civil Preparedness Guide
CSEPP	Chemical Stockpile Emergency Preparedness Program
DFO	Disaster Field Office
DMAT	Disaster Medical Assistance Team
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DRC	Disaster Recovery Center
DWI	Disaster Welfare Information
EAS	Emergency Alert System
ECL	emergency classification level
EMI	Emergency Management Institute
EMP	electromagnetic pulse
EMS	emergency medical services
EOC	emergency operating center
EOP	emergency operations plan
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPG	Emergency Planning Guide

EPI	emergency public information
EPZ	Emergency Planning Zone
ERT	Emergency Response Team
ERT-A	Emergency Response Team Advance Element
ERT-N	Emergency Response Team National
ESF	Emergency Support Function
EST	Emergency Support Team
FAsT	Field Assessment Team
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIA	Federal Insurance Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FPEIS	Final Programmatic Environmental Inpact Statement
FRERP	Federal Radiological Emergency Response Plan
FRP	Federal Response Plan
GAR	Governor's Authorized Representative
GIS	geographic information system
HAZMAT	hazardous material
HRCQ	highway route controlled quantity
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IRZ	Immediate Response Zone
JIC	Joint Information Center
JIS	Joint Information System
JNACC	Joint Nuclear Accident Coordinating Center
LEPC	Local Emergency Planning Committee
MOU	memorandum of understanding
mph	miles per hour
MSDS	material safety data sheet
NAAP	Newport Army Ammunition Plant
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NDA	National Defense Area
NDMS	National Disaster Medical System
NFA	National Fire Academy

NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NRC	Nuclear Regulatory Commission; National Response Center
NRT	National Response Team
NUREG	Nuclear Regulation
NWS	National Weather Service
OPA	Oil Pollution Act
OSC	On-Scene Coordinator
OSHA	U.S. Occupational Safety and Health Administration
PA	public address
PAZ	Protective Action Zone
PBA	Pine Bluff Arsenal
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
PL	Public Law
PPA	Performance Partnership Agreement
PUDA	Pueblo Depot Activity
PZ	Precautionary Zone
RACES	Radio Amateur Civil Emergency Service
RAP	Radiological Assistance Program
REACT	Radio Emergency Associated Communications Teams
REP	Radiological Emergency Preparedness Program
ROC	Regional Operating Center
ROD	Record of Decision
RRP	Regional Response Plan
SAME	Specific Area Message Encoder
SARA	Superfund Amendments and Reauthorization Act
SCO	State Coordinating Officer
SEMA	State Emergency Management Agency
SERC	State Emergency Response Commission
SLG	State and Local Guide
SOP	standard operating procedure
SPCA	Society for the Prevention of Cruelty to Animals
TEAD	Tooele Army Depot
UMDA	Umatilla Depot Activity
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

US&R	urban search and rescue

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