

EOC'S MANAGEMENT AND OPERATIONS COURSE



INDEPENDENT STUDY

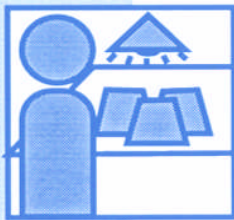
IS 275
JULY 1995



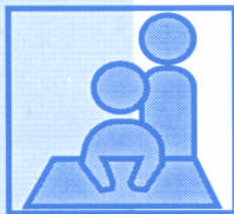
EMERGENCY OPERATION CENTER



Design



Operations



Management



Exercises

Federal Emergency Management Agency
Emergency Management Institute



TABLE OF CONTENTS

Foreword.....	ii
Introduction.....	iii
Module 1: The Role of the Emergency Operations Center.....	1-1
Module 2: EOC Management and Operations: Roles and Responsibilities	2-1
Module 3: Developing EOC Policies and Procedures	3-1
Glossary	G-1
Resources	R-1
References.....	RF-1
Curriculum Guide	CG-1
Appendix A: Sample Hazard Vulnerability Analysis.....	Appendix–A
Answer Key	Answer Key–1
Final Examination.....	Final Exam–1

Foreword

Foreword

Course Sponsors

The Emergency Management Institute (EMI) had the primary role for coordinating development of this course.

Independent Study Course

This independent study course is geared toward persons who have responsibility for management and operations of the Emergency Operations Center (EOC). It is a prerequisite for enrollment in the EOC Management and Operations course which is described in the introduction. The course includes a final examination, which must be completed with a passing rate of 75% or higher to enroll in the EOC Management and Operations course.

Introduction

Introduction



After-action reports and studies of catastrophic disasters have identified the need for training in response and recovery operations, including Emergency Operations Center (EOC) management. Additionally, interviews conducted by EMI officials with State and local emergency management directors, operations officers, and training officers indicated a need for training in EOC management.

Based on the findings of a front-end analysis and design meeting, a curriculum was developed to provide those persons with responsibility for EOC management and operations with the knowledge and skills they need to perform their jobs.

Curriculum Goal

The goal of the EOC Management and Operations curriculum is to provide State and local emergency management officials with the knowledge and skills they need to operate the EOC. The curriculum is designed using a performance-based approach that emphasizes learning activities that are easily transferable to the job.

Curriculum Overview

The curriculum consists of the independent study course and the EOC Management and Operations course. The diagram on the following page provides an overview of the course content. The independent study course is a prerequisite to enrollment in the EOC Management and Operations course.

EOC MANAGEMENT AND OPERATIONS CURRICULUM

EOC's Role in Community Preparedness, Response and Recovery Actions

- Module 1: The Role of the Emergency Operations Center
- Module 2: EOC Management and Operations: Roles and Responsibilities
- Module 3: Developing EOC Policies and Procedures

EOC MANAGEMENT AND OPERATIONS COURSE

Module 1: Designing the EOC

- 1 EOC Location and Physical Design Considerations
- 2 EOC Functional and Space Layouts
- 3 Financing the EOC

Module 2: Managing the EOC

- 1 Organizing the EOC
- 2 Staffing the EOC
- 3 Maintaining Cooperation and Communication in the EOC
- 4 The Psychological and Social Climate of the EOC

Module 3: Operating the EOC

- 1 Using SOPs in EOC Management and Operations
- 2 Creating Job Aids
- 3 Developing SOPs Using Job Aids
- 4 Conducting Briefings
- 5 Conducting Exercises and Evaluations of the EOC's SOPs

Module 4: Exercising/Evaluating the EOC's SOPs

- 1 Exercise 1: Activation and Set Up of the EOC
- 2 Exercise 2: Relocate and Set Up an Alternate EOC
- 3 Exercise 3: Resolving Operational Problems in the Alternate EOC
- 4 Exercise 4: Managing the EOC
- 5 Exercise 5: Deactivating the EOC



Course Overview

This independent study course is intended to provide you with a general introduction to the role of the Emergency Operations Center (EOC), the emergency manager's responsibilities, the roles and responsibilities of the person(s) responsible for EOC management and operations. It also provides an overview of the types of standard operating procedures required for effective EOC operations.

It is expected that participants will have some general knowledge of emergency management. However, experience in managing an EOC is not a requirement for this course.

This course contains three modules, a glossary, a resource section, a curriculum guide to help you continue learning, and a final examination.

Module 1: The Role of the Emergency Operations Center describes the functions of the EOC, identifies considerations regarding EOC staffing, identifies minimum EOC resource requirements, and describes the physical characteristics of an EOC.

Module 2: EOC Management and Operations: Roles and Responsibilities describes the roles and responsibilities of the person(s) responsible for EOC management and operations.

Module 3: Developing EOC Policies and Procedures provides essential information on the requirements of policies and standard operating procedures for communications systems, life support systems, operating equipment and supplies, memorandums of understanding, and records and documentation retention for EOC operations.

The **glossary**, located at the end of the final module, contains definitions of terms related to EOC management and operations. The glossary may be consulted while you are reading the modules, or may be read separately.

A **resource section** is included to help you continue learning after you have completed the course. It consists of a list of references and other recommended courses.

A **curriculum guide** is included to help you locate other courses that may be helpful in learning about specific aspects of the emergency manager's job, such as telecommunications and warning systems.



The **final examination**, located at the end of the course materials, will test the knowledge you have gained from the course. An answer sheet is supplied with the course materials. Mail the completed form to the address on the form, or if you have been given other instructions, follow those. You must score 75% or higher to enroll in the EOC Management and Operations course.

How to Complete This Course

You can gain more from your independent study learning experience by following these study tips.

You will remember the material best if you do not rush through it. The more you **interact** with the material, the better you will remember it! Take a break at the end of each module, and give yourself time to think about the material.

For the video segment of this course, first view the video in its entirety. Then, complete the questions that pertain to the video. If you can't answer all of the questions, view the video again.

Module 1

**THE ROLE OF
THE EMERGENCY
OPERATIONS CENTER**

Module 1

THE ROLE OF THE EMERGENCY OPERATIONS CENTER

OBJECTIVES

At the end of this module, you will be able to do the following:

1. Describe the functions of the EOC.
 2. Identify considerations regarding EOC staffing.
 3. Identify minimum EOC resource requirements.
 4. Describe the physical characteristics of an EOC.
-

CONTENT

Title	Page
Introduction	1-2
Four Phases of Emergency Management	1-2
The Role of Emergency Operations Center—Video Tape	1-4
Learning Activity	1-8
Summary	1-14

REQUIRED MATERIALS

Course manual
Video Cassette Recorder (VCR)
Videotape: The Role of the Emergency Operations Center

Introduction

Emergency management is the process of coordinating available resources to deal with emergencies effectively, thereby saving lives, avoiding injury, and minimizing economic loss.

Major emergencies or disasters can cover several jurisdictions and may require large-scale government and voluntary agency response. When an emergency threatens, hundreds to thousands of people may need to be warned and protected. Emergency services must be ready to care for the injured and to give shelter to those who cannot remain in their homes. Communications systems must be in place, and someone must direct the response activities. There must be ways to assess the damage caused by the emergency, to return people safely to their homes after the danger has passed, and to help people and businesses return to normal as soon as possible. Efforts must be made to increase safety in the face of future emergencies.

This protection process involves four phases of emergency management: mitigation, preparedness, response, and recovery.

Four Phases of Emergency Management

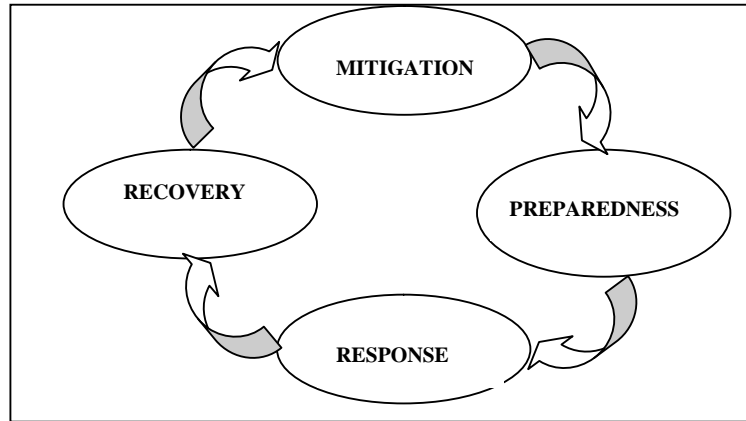
Mitigation. This phase includes any activities that prevent an emergency, reduce the chance of an emergency occurring, or reduce the damaging effects of unavoidable hazards. Mitigation activities should be considered long before an emergency occurs.

Preparedness. This phase includes developing plans to ensure the most effective, efficient response; taking steps to minimize damages, such as installing forecasting and warning systems; and equipping the EOC for operations during an emergency. A key component of the preparedness stage consists of training and exercising the EOC and the personnel and volunteers who will be staffing the EOC in an emergency.

Response. Response is the first phase that occurs *after* the onset of an emergency or disaster. It is intended to provide emergency assistance for casualties, including search and rescue, shelter, and medical care, to reduce the probability of secondary damage and to reduce damage by efforts such as sandbagging against impending floodwaters.

Recovery. The activities undertaken during this phase involve steps to return all systems to normal after an emergency. This phase includes such functions as redevelopment loans, legal assistance, and community planning.

Experience shows that these phases are cyclical, as illustrated below, rather than linear in their interrelationships. All activities and experiences lead individually and cumulatively back to the mitigation phase.



Four Phases of Emergency Management

Put another way, we learn to prevent and diminish future emergencies by what we learn from past events, whether through actual emergencies or through simulation of response activities. The disaster or emergency, actual or potential, can be seen as the motivating force for the motion of the cycle.

Every community, no matter how large or small, urban or rural, will be able to improve its ability to centralize and coordinate the flow of information during an emergency (and the effectiveness of response and recovery operations) by establishing an EOC.

The videotape that you will watch next provides a good introduction to emergency operations management. The following is a brief introduction to the video, *“The Role of the Emergency Operations Center.”* After you have read the introduction, you can begin viewing the video.



Overview of “The Role of the Emergency Operations Center” Videotape

The videotape begins with a montage of disaster scenes, including floods, hurricanes, an airplane crash, tornadoes and earthquakes. On-scene modules responding to disasters are also depicted. A narrator explains that emergencies can occur anywhere, at any time, and that such emergencies can overwhelm a community's ability to respond by ordinary methods. Extraordinary methods are required to meet large-scale emergencies, and Emergency Coordination Centers (ECCs) provide direction for such disaster response efforts.

The video includes an interview with the Director of North Carolina's Division of Emergency Management. The Director describes the importance of the jurisdiction's EOC during Hurricane Hugo. In a second interview, the Director of Disaster and Emergency Services, Woodbury County, Iowa, discusses the Sioux City EOC's response to the plane crash in 1989.

After the interviews, scenes inside an EOC provide the setting for discussing the location and layout of ECCs. Also identified are the equipment, facilities, and resources required to support an EOC in a major emergency.

The videotape highlights the duties of, and the interaction among, EOC personnel during a full-scale exercise.

A former Emergency Operations Manager then discusses the importance of exercising the staff of an EOC on a regular basis.

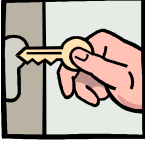


The Role of the Emergency Operations Center

The video lasts 18 minutes and 6 seconds. After viewing the video, be prepared to answer questions about what you learned. Use the space provided on the following page to take notes.

The following are key points that you should remember about the role of the Emergency Operations Center.

Key Points



1. ECCs are key to a community's disaster planning, response, and recovery. They are crucial to saving lives and property.
2. ECCs pull together people and resources to handle emergencies and disasters that are outside the ability of single departments to handle.
3. ECCs are the key to managing a community's disaster efforts through the centralized, coordinated efforts of government officials, response agencies, and community volunteers.
4. ECCs provide a means of centralizing and managing communications and information within an EOC, between an EOC and the Incident Commander in the field, and between the EOC and the public.
5. There is no one type of EOC; they vary in size and configuration, and most facilities will serve dual purposes.
6. Location of the EOC must be based on an analysis of potential threats to the community, since it must survive likely disasters.
7. Alternate sites, backup power, and communications equipment will ensure continued operations in even the worst conditions.
8. ECCs should protect communications and Automated Data Processing (ADP) equipment from power surges and other electromagnetic effects.
9. ECCs must have the resources and trained personnel to handle long-term operational requirements such as sustained occupancy.
10. EOC staff job assignments must be carefully planned, exercises must be conducted, and regular training must be provided.
11. The Standard Operating Procedures (SOPs) (tailored to individual ECCs) are the key document for planning, training, and operational guidance.

12. Documentation management must safeguard documents generated or received by ECCs for use after an emergency.

Learning Activity

Take a few minutes to complete the learning activity on the following page.



Learning Activity



Purpose: To assess your understanding of the information that was presented in the video.

Directions: Answer the following questions. You can check your answers in the Answer Key section.

1. What roles does an EOC perform that can save lives and property?

2. During a disaster, response operations must be run efficiently and in a coordinated manner. How does an EOC help achieve such a response?

3. If individual departments can handle certain emergencies, why is an EOC necessary?

4. The videotape pointed out the key role that communications play in the operation of an EOC. How is the communications function organized in an EOC?

5. What term does the videotape use to identify the individual in charge of the EOC?

6. Many disasters last several days. If you were the EOC manager, how would this affect your staffing decisions?

7. Under what circumstances would an EOC be activated in advance of a disaster? Would all personnel be called up initially?

8. Besides personnel, what are some of the resources required to keep an EOC functioning?

9. Given the critical role communications plays in the functioning of an EOC, what aspects of this vital resource must receive careful consideration?

10. What purpose does a typical EOC Standard Operating Procedure serve?

11. If you were asked to design an EOC, what design factors would be important?

12. Coordinating disaster operations is key to an effective EOC. Does this require that all personnel be located in one space? Why or why not?

13. What is the primary means for ensuring that EOC personnel are always ready to respond to a disaster in your community?

14. If you do not have either an EOC or SOPs, who should be involved in the planning to implement or establish an EOC and in the writing of procedures?

What About Your Community's EOC?

The questions you just answered were about EOCs in general. Now take a few minutes to answer some questions that are specific to *your community's EOC*.

1. What emergencies or disasters has your community experienced recently that could have benefited from the coordination possible with an EOC?

2. What hazards exist in your area that could lead to a disaster requiring an EOC in the future? How would an EOC be impacted for each hazard you identified?

3. With which agencies would personnel inside your community's EOC need to communicate during a disaster?

Summary



In this module, you learned the following:

- The four phases of emergency management;
- The role of the EOC;
- The functions of an EOC;
- How to identify considerations regarding EOC staffing;
- How to identify minimum EOC resource requirements;
and
- The physical characteristics of an EOC.

In the next module you will learn about the roles and responsibilities associated with EOC management and operations.

Module 2

EOC MANAGEMENT AND OPERATIONS: ROLES AND RESPONSIBILITIES

Module 2

EOC MANAGEMENT AND OPERATIONS: ROLES AND RESPONSIBILITIES

OBJECTIVES

At the end of this module, you will be able to do the following:

1. State the roles and responsibilities related to EOC management and operations.
2. Describe how the person responsible for EOC management and operations fits into the overall emergency management system.

CONTENT

Title	Page
Introduction	2-2
The Role of the Emergency Manager	2-2
EOC Management and Operations: Responsibilities	2-3
Summary	2-6

REQUIRED MATERIALS

Course manual

Introduction

The local level—whether city, town, or other designation—is the first line of official public responsibility for emergency management activity. In an emergency, Federal and State resources may not be available. Therefore, the local emergency management agency must accept responsibility to maintain an ongoing program of mitigation, preparedness, response, and recovery. The emergency manager plays a critical role in ensuring that the local community is prepared for all types of disasters.

The Role of the Emergency Manager



The role of the emergency manager should be defined specifically by law. This position encompasses responsibility for coordinating all components of the emergency management system for the community. These components include:

- Civil defense efforts
- Fire and police services
- Emergency medical services
- Public works
- Volunteers
- Other groups involved in emergency activities

This means coordinating resources from all sectors before, during, and after an emergency. It also encompasses activities related to mitigation, preparedness, response, and recovery.

In order to ensure that effective coordination takes place during any phase of operation, the emergency manager and others responsible for EOC management and operations must work closely in a team environment with other EOC personnel, elected officials, and other private-sector groups.

The role of the emergency manager is to do the following:

- Ensure that all components of the system know of threats to the community
- Participate in mitigation and prevention activities
- Coordinate planning activities for emergencies using an all-hazards approach
- Coordinate operations during emergency situations
- Coordinate and assist in recovery operations after disasters

The emergency manager's job demands a broad-minded approach to successful emergency management. The emergency manager's foresight in planning for an emergency before the first crisis arises is critical to being prepared. To become involved in the planning process, the emergency manager should be one of the committee members in developing an Emergency Operations Plan (EOP) and a hazards and vulnerability analysis for the community.

**EOC Management
and Operations:
Responsibilities**

Who is responsible for EOC management and operations responsibilities?

Many of the emergency-related duties or tasks to be accomplished are coordinated by the emergency manager, but may be carried out by another person designated by the emergency manager. This person is often given primary responsibility for duties related to EOC management and operations.

Other non-emergency-related tasks may be performed by other designated EOC personnel.

Though the duties and responsibilities for EOC management and operations may vary according to jurisdiction, there are core tasks that any designated person would perform. Some of these responsibilities may arise before the EOC is ever activated, and others are ongoing. When the center is activated, additional responsibilities involve the direction, control, and coordination of numerous activities that develop in an emergency situation.

The EOC Management and Operations: Responsibilities worksheet below is a representative listing of typical duties related to EOC management and operations. Enter a check mark next to each task that you perform or would be expected to perform.

EOC Management and Operations: Responsibilities	
_____	1. Assist in the location and design of an EOC.
	<i>Participate in the following activities involved in the location and design of the EOC.</i>
_____	a. Form/convene planning team/committee.
_____	b. Use a hazard/vulnerability analysis to assist in locating/designing an EOC.
_____	c. Define functions performed in the EOC.
_____	d. Determine the number of personnel required to operate the EOC.
_____	e. Determine space requirements for the EOC.
_____	f. Determine funding requirements for the EOC.
_____	g. Assess and evaluate functional layout (i.e., operational efficiency) of the EOC.
_____	h. Develop contingency plan for interim operations.
_____	2. Assist in the preparation of the EOC for operations (i.e., fully functioning capability).
	<i>Participate in the following activities in preparing the EOC for operations.</i>
_____	a. Assist in determining telecommunications requirements.
_____	b. Assist in defining life support requirements.
_____	c. Assist in determining operating equipment/supplies needed.
_____	d. Ensure that procedures are in place to maintain support systems and equipment.

**EOC Management
and Operations:
Responsibilities**

Though the duties and responsibilities for EOC management and operations may vary according to jurisdiction, there are core tasks that any designated person would perform. Some of these responsibilities may arise before the EOC is ever activated, and others are ongoing. When the center is activated, additional responsibilities involve the direction, control, and coordination of numerous activities that develop in an emergency situation.

The worksheet on the following page is representative listing of typical duties related to EOC management and operations. Enter a check mark next to each task that you perform or would be expected to perform.

EOC Management and Operations: Responsibilities	
_____	3. Assist in staffing, training, and briefing EOC personnel.
_____	<i>Participate in the following activities related to staffing, training, and briefing of EOC personnel.</i>
_____	a. Identify job positions
_____	b. Help compile assignments.
_____	c. Maintain and update and EOC personnel contact list.
_____	d. Establish notification procedures.
_____	e. Exercise and evaluate SOPs.
_____	f. Conduct briefings for EOC personnel.
_____	4. Manage and operate the EOC.
_____	<i>Participate in the following activities related to managing and operating an EOC.</i>
_____	a. Implement activation procedures.
_____	b. Assist in the maintenance (or setting up of procedures for maintenance) of telecommunications.
_____	c. Ensure that procedures are in place for operating the EOC during an emergency.
_____	d. Ensure that procedures are in place for maintaining operating equipment and supplies.
_____	e. Ensure that SOPs are accessible and available to EOC personnel.
_____	f. Supervise EOC staff.
_____	g. Monitor personnel for symptoms of stress.
_____	h. Conduct briefings and debriefings.
_____	i. Initiate and monitor systems for the documentation of reduction in need for EOC services.
_____	j. Ensure that systems are in place for archiving records.
_____	k. Ensure that procedures are in place to restock/resupply the EOC.
_____	l. Evaluate SOPs and the EOP.

Summary



In this module, you learned the following:

- The roles and responsibilities of the EOC manager, and
 - The responsibilities related to EOC management and operations.
-

Module 3
*DEVELOPING EOC POLICIES
AND PROCEDURES*

Module 3

DEVELOPING EOC POLICIES AND PROCEDURES

OBJECTIVES

At the end of this module, you will be able to do the following:

1. Describe key elements of the emergency management system that are vital to EOC management and operations.
2. Understand the factors related to developing standard operating policies and procedures for communications systems, life support systems, operating equipment and supplies, and records and documents retention.

CONTENT

Title	Page
Introduction	3-2
The EOP and the HVA: Foundations for Establishing an EOC	3-2
Developing Policies and Procedures for EOC Management and Operations	3-8
Summary	3-21

REQUIRED MATERIALS

Course manual

Introduction

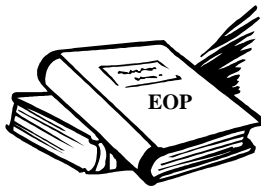
The hazard vulnerability analysis and the Emergency Operations Plan are two documents that should be completed prior to establishing an EOC. They provide the foundation for much of the planning and design and should not be overlooked. This module provides essential information that you should know about these documents.

This module also describes how standard operating policies and procedures help to ensure that the EOC runs smoothly, without interruption during a disaster. It also presents information about factors related to developing SOPs. The information you learn in this module will provide the background that you need for creating SOPs which is covered in Module 3 of the EOC Management and Operations course.

The EOP and the HVA: Foundations for Establishing the EOC

The Emergency Operations Plan (EOP) and the hazard vulnerability analysis (HVA) are two documents that should be in place prior to the establishment of any EOC. Much of the information contained in these documents can be used to ensure that a survivable EOC is designed and developed. They are also helpful in developing standard operating procedures and policies. Each of the documents is explained below.

The Emergency Operations Plan (EOP)



The EOP is a document that describes how citizens and property will be protected in a disaster or emergency. It describes the community's approach to planning, organizing, and operating in emergencies, and includes a resource identification and management system.

An effective EOP is needed to turn a concept of operations, people, sets of equipment, and specific SOPs into an effective emergency response. The EOP usually contains eight main elements, as identified in the table on page IS-3-4. Specific annexes tell agencies or individuals how they will operate under all four phases.

For example, the Direction and Control annex will provide guidance and procedures on how the EOC will operate in all four phases—mitigation, preparedness, response, and recovery. There should also be specific SOPs for the EOC management and operations.

To be meaningful, an emergency operations plan should be known, exercised, and used by every agency and department with a role to perform. Further, it must be updated regularly. Unless the plan is a living document—not paper on a shelf—it is not a true safeguard of your community's lives and property.

SOPs also may be a part of the EOP, along with checklists. Each component may have addenda in the form of maps, charts, tables, or other items.

Detailed guides for the development and review of EOPs are provided in CPG 1-8, “*Guide for the Development of State and Local Emergency Operations Plans,*” and CPG 1-8A, “*Guide for the Review of State and Local Emergency Operations Plans.*”

 **Task Assignment** 

Obtain a copy of your community’s Emergency Operations Plan and compare it against the plan elements listed on the following table. *Is it complete?*

Main Emergency Operations Plan Elements

1. **Purpose:** The plan discusses how emergency operations planning fits into the applicable governments' overall emergency planning structure.
2. **Situation and Assumptions:** The plan describes, in general terms, situations pertinent to the jurisdiction as well as their potential scope and impact. Assumptions about the emergency organization in relation to emergency preparedness should be stated.
3. **Concept of Operations:** The plan describes the various levels of government roles in the four phases (preparedness, mitigation, response, and recovery) of emergency management, including capabilities, inter-jurisdictional and inter-organizational relationships, authorities, and responsibilities for continuity of government.
4. **Organization and Assignment of Responsibilities:** This element of the plan expands on item 3 and includes procedures for monitoring/evaluating assignment accomplishments.
5. **Administration and Logistics:** The plan describes implementation alternatives to regular procedures for transition to emergency operations. The plan further includes administrative details for State government transport and establishment of emergency operations from an alternate EOC.
6. **Plan Development and Maintenance:** The plan describes the process of determining hazard identification as required capabilities, available resources, organizational structure, agreements, and vulnerabilities. It provides processes for implementation, evaluation, review, and revision/updating. It contains annexes as needed. An annex explains how a function is to be carried out in an emergency. The annexes, as listed in CPG 1-8: "Guide for the Development of State and Local Emergency Operations Plans" are:

Annex A—Direction and Control	Annex I—Law Enforcement
Annex B—Communications	Annex J—Public Works
Annex C—Warning	Annex K—Fire and Rescue
Annex D—Emergency Public Information	Annex L—Radiological Defense (Protection)
Annex E—Evacuation	Annex M—Human Services
Annex F—Reception and Care	Annex N—Resource Management
Annex G—In-Place Protective Shelter	Annex O—Continuity of Government (COG)
Annex H—Health and Medical	Annex P—Damage Assessment
7. **Authorities and References:** The plan cites applicable laws, ordinances, and agreements and the plan's implementation of them.
8. **Definition of Terms:** The plan defines unique specialized terms and vocabulary to aid effective communication.

The Hazard and Vulnerability Analysis

If you are familiar with the HVA and were actively involved in the process, you can skip this section and move on to the next page.

The first step in developing an integrated emergency management program in the community is to identify the hazards that threaten your specific area, determine the risks the hazards pose, and assess the vulnerability of your jurisdiction to these hazards. Combining these three elements—hazards, risks, and vulnerabilities—will produce a profile of your jurisdiction that is basic to defining your emergency operations requirements.

All geographical areas of the United States are vulnerable to a variety of natural, technological, and national security hazards. Identification of hazards must be accompanied by a determination of the risk each hazard poses. Risk assessment includes identifying the frequency and severity of occurrences in particular locations to allow for a ranking of the risk. The occurrence of one hazard of a certain intensity, duration, or extent may well drastically increase the risk level of other hazards.

A hazard identification involves a review of hazards and of locations and conditions associated with hazards in a particular area.

The *vulnerability analysis* is an examination of the degree to which populations, structures, and land areas are vulnerable to hazards.

The hazard identification and vulnerability analysis are interrelated and are usually conducted simultaneously. The two together may be called a hazard analysis, hazard/vulnerability analysis, or risk analysis. Key steps in conducting a hazards/vulnerability analysis are listed in the table on the following page.

Hazards, Risks, and Vulnerabilities Checklist

1. Based on history and other sources that define threats, list the hazards and risks that have affected your State or local community or that may affect your jurisdiction.
2. Estimate the probability of future occurrences of each incident.
3. Evaluate the possibility of new types of incidents resulting from population changes, new transportation routes and types, and the like.
4. Evaluate combinations of events and the possibility of one event causing another.
5. Develop a jurisdiction-wide map of probable and possible occurrences, including “spillover” events from neighboring jurisdictions. Also, evaluate vulnerability caused by interdependencies between systems such as power, transportation, water treatment, and communications. Specifically assess the vulnerability of key emergency management systems needed to direct, control, and coordinate emergency operations and continue to govern.
6. Assess the potential regional size, shape, and evolution of specific incidents.
7. Assess the potential consequences for your jurisdiction and others resulting from any of the potential incidents.
8. Review the incident analysis at the city and county level to be sure that any local factors affecting probability, severity, ability to respond, or potential consequences are considered.
9. Review the experiences and “lessons learned” from previous incidents.
10. Based on both probabilities of occurrence and severity of consequences, draw up a prioritized list of incidents your jurisdiction must be prepared to handle and the risks they pose.

The information obtained from the hazard/vulnerability analysis can be used to develop an overall emergency management strategy that serves as the basis for program activities and the allocation of resources. Some of the activities at this stage include the following:

Resource Inventory: An analysis of the resources a community can call upon in the event of an emergency.

Authorities Review: A detailed examination of laws, ordinances, and regulations applicable to emergency management in a community.

Funding Analysis: A review of funding and funding sources for emergency management activities.

The emergency manager is actively involved in these activities.

**Using the HVA for
Locating and
Designing an EOC**

Different hazards have different effects on our ability to survive the event and to continue to direct, control, manage, and coordinate emergency operations both within a jurisdiction, with other state and local governments, and with the Federal government.

The design criteria for an EOC depend to a great extent on the types of disasters that could occur in any given community. The HVA provides a good basis for determining the “worst-case scenario” in locating and designing the EOC. The most critical consideration is the ability of the EOC to survive any emergency or disaster with continuous operations.

Protection should be an integral part of planning, building or modifying, and equipping the EOC. Securing the building and its staff against a wide variety of conditions will require close examination of its basic location (outside immediate hazard areas); structural integrity (ability to withstand storms, terrorist assault, etc.); and security procedures.

Once the EOC has been established, then the focus is on effective management and operations of the EOC.

 **Task Assignment** 

Before you move onto the next topic, take a few minutes to find out if your community has conducted an HVA. If it has, obtain a copy and review it to determine the community’s most likely hazards. If the community doesn’t have an HVA, what initiatives can you take to begin the process to conduct an analysis?

If you can’t locate an HVA, a sample copy of an HVA appears in Appendix A.

**Developing Policies
and Procedures for
EOC Management
and Operations**

Effective EOC management and operations is dependent upon written policies and procedures that are in place prior to an emergency. Without these written guidelines, coordinated and responsive efforts cannot be achieved in an emergency. While each EOC will have its unique requirements, there are certain standard policies and procedures that should be available in any EOC.

The EOC should have standard operating procedures and policies related to the following:

- Communications
- Life Support
- Equipment and Supplies
- Documents and Records Retention

These are just a few of the SOPs that may be required. You'll learn about others in Module 3 of the EOC Management and Operations course.

Communications Policies and Procedures

Adequate communications are essential to a government's ability to direct its emergency forces effectively in an emergency. To this end, there must be plans for the effective emergency use of the extensive communications systems that are used to meet government's day-to-day needs. Additionally, privately owned communication systems should—to the extent that they can be made available—be adapted to serve government needs in emergencies.

There are communications experts who are knowledgeable about the technical details of communications/telecommunications systems. You should consult them at every stage to ensure that the EOC's system is fully functioning, compatible with other systems, and able to handle the demand of increased calls during an emergency.

The following paragraphs point out some factors that you should be aware of in developing your communications policies and procedures.

✓ Develop Communications and Warning Annex

The communications and warning annex should be developed based on hazard/vulnerability analysis data. A hazard/vulnerability analysis will help identify the kinds of emergency conditions which could occur locally that would require activating emergency communications procedures. These considerations can help define the communications procedures to be developed.

For example, if the community is flood-prone, the communications team might decide to locate both primary and backup communications facilities and emergency power supplies well out of the floodplain.

The communications and warning annex should address the following issues:

- General responsibilities for developing and maintaining an emergency operations communications and warning system
- Assignment of duties and responsibilities for designated local government and supporting agencies
- Direction and control issues related to overall management of the communications and warning system

- Lines of succession in the event that an official or agency charged with direction and control of the communications and warning system is unable to do so
- Administrative and logistics issues such as facilities and equipment needs, security, and training.
- Plan development and maintenance.

The annex should be reviewed, updated, and modified annually. Any changes in operating policy, procedures, or lines of succession should be reflected in the revised plan.

✓ **Develop Communications SOPs**

EOC communications SOPs cannot resolve all major problems, but properly designed procedures, strengthened by frequent testing, can lessen their severity. SOPs can also help to lessen the confusion that occurs in a crisis.

Some typical communications SOPs include the following:

- Available communications systems
- Frequencies listing
- Call-up and alerting procedures for communications personnel
- Location of communications supplies and equipment
- Set up procedures for communications equipment
- Tasks and responsibilities for communications personnel
- Communications send and receive procedures
- Procedures for internal face-to-face communication, particularly regarding relaying messages

You'll learn how to develop communications SOPs in Module 3 of the EOC Management and Operations course.

 **Task Assignment** 

Before you move on to the section on life support policies and procedures, take a few minutes to find out about the existing communications procedures in your office. See if you can obtain a copy of the Communications and Warning Annex and any SOPs related to communications.

Based on what you've learned, review these documents to determine if they are adequate. What type of information is missing?

Life Support Policies and Procedures

In some emergency situations, EOC staff may be isolated from the community for an extended period of time. Thus, it's important to have life support systems to ensure that EOC personnel are able to function under crisis conditions for at least a 2-week period. At a minimum, the following life support requirements must be addressed:

✓ **Identify the EOC's Life Support Requirements and Sources of Assistance**

There are numerous agencies, corporations, vendors, and volunteer groups that are willing to assist you in planning for disaster operations. Some will provide goods and services free of charge, while others will require remuneration of some kind. Others, such as banks, may be willing to donate funds.

For those requiring payment, be sure to establish a memorandum of agreement, or some type of legal agreement or procurement contract to ensure that the goods and services will be available when you need them.

Once you have identified sources, you should maintain a list of their names and phone numbers.

The following is a listing of the minimum life support requirements for an EOC.

LIFE SUPPORT REQUIREMENTS

↳ SLEEPING ACCOMMODATIONS

Some type of sleeping arrangements should be available to accommodate at least half of the EOC staff. Two or three-tier bunks can be used to conserve space. Sleeping bags and portable beddings should be readily available from a storage location near the EOC. Resting facilities should be located in a quiet location.

↳ FOOD SERVICE

Facilities should be provided to feed staff for at least a 14-day period. **Avoid** sugar-laden and fat-filled foods such as hot dogs, hamburgers, candy bars, donuts, and pastries. Sugar can cause irritability, hyperactivity, and depression. Fats cannot provide the fuel that emergency personnel need to handle intense activity levels.

More suitable foods include plain granola bars, fresh and dried fruits, milk, hard cheeses, whole-grain breads, crackers, and fresh vegetables. Avoid overuse of caffeine and sugar-laden beverages; alcoholic beverages should not be available.

↳ WATER

Arrangements for water should be in place. If faucet water becomes undrinkable, bottled water and/or water sanitation tablets should be available. A minimum of 10 gallons of water per day, per person should be provided for the EOC occupants, plus an additional quantity to satisfy mechanical and other requirements for water. Water must also be available for showers, waste disposal systems, firefighting equipment, etc.

↳ SANITARY FACILITIES

Facilities such as toilets, showers, laundry, and garbage disposal should be provided. These should be located away from the operations area. Supplies such as toilet paper should be readily available to meet the demand caused by having more people using the facilities.

⚡ **MEDICAL SUPPLIES**

Medical supplies should be limited to those required for a dispensary-type operation. First aid kits and an extra supply of bandages and antiseptics should be priority items, as well as medicines to treat diarrhea, headaches, constipation, and some respiratory problems.

⚡ **HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)**

Facilities should be comfortable at all times. Ensure that procedures are in place to compensate for failed HVAC conditioning systems. Battery-operated backup equipment should be available.

NOTE: For detailed information on life support system requirements, refer to CPG 1-20, Appendix I (change 1).

✓ **Review Existing Standards Related to Life Support Systems**

There may be some Federally, State and locally defined standards for life support systems. You should check with your records and documents office for up-to-date information on these standards to ensure that you're in compliance. Standards help ensure that entities maintain a minimally acceptable level of performance and operations for life support systems.

The CPG 1-20 specifies the following standards as they relate to life support systems.

- **Heating, Ventilation, and Air Conditioning.** The ventilation system must supply not less than 15 cubic feet per minute (cfm) of fresh air per person in the occupied space, of which at least 5 cfm must be outside air. This will be sufficient to supply the necessary oxygen for breathing and to purge the air of carbon dioxide produced by breathing.

In most cases, however, it will not be enough to maintain the temperature and humidity within the desired limits. Some form of heating will usually be necessary during cold weather, and some form of cooling will be needed during hot weather. For specific details on HVAC requirements within the EOC, refer to CPG 1-20 (change 2).

- **Shelf Life of Supplies.** Foodstuffs, medical supplies, and other staples in the EOC often have short shelf lives. If an EOC is stocked with perishables, every effort should be made to supplement them with items of longer storage life. In some situations, it may be helpful to rotate the stock.

✓ **Train Personnel and Test and Exercise Life Support Systems Periodically**

Life support systems are an essential component of successful emergency operations. Thus, it's imperative that a regular schedule of training and exercising be implemented. Post-incident critiques should be used to improve operations.

You'll learn how to develop life support SOPs in Module 3 of the EOC Management and Operations course.

Operating Equipment and Supplies Policies and Procedures

There are no standards or optimum supply requirements to operate the EOC. Your requirements will depend on the type of emergency, the number of EOC staff, the size of the EOC, and numerous other factors. If historical data exist, use these as the basis for your estimates. Your estimates for fully functioning equipment and sufficiency of supplies should be based on a 2-week operational period.

The more attention you give to acquiring appropriate supplies prior to an emergency the less you will need to rely on a backup plan for obtaining supplies. In selecting equipment, whether for initial purchase or backup plans, consider the following:

- **Mobility.** Since conditions change during a crisis, the EOC's configuration must be flexible. Bulky, heavy, or cumbersome supplies and equipment should not be used.
- **Reliability.** Equipment should be durable and reliable. If the equipment has a tendency to break down, then spare parts, repair instructions, and training for maintenance should be included in the planning effort and—where possible—incorporated in the SOPs. Batteries should be rotated.

- **Electrical Compatibility.** All electrical equipment should be test run on the EOC emergency power supply. All equipment operating standards should be carefully compared to emergency power standards.
- **Sustainability.** Primary power sources often fail, so you should plan for backup methods to operate equipment. Similarly, you must have backup supplies to replace alternate power sources, such as batteries and generators. The following should be in place:
 - Spare parts inventory for backup lighting, communications, ventilation, and other necessary maintenance
 - Auxiliary lighting such as flashlights, batteries, and bulbs
 - Office materials, including an adequate supply of forms, pencils, paper clips, tape, notepads, etc.; computer equipment should not be dependent on outside data banks because they could fail—keep a manual typewriter available in case of an electrical power failure
 - Recording equipment such as instant cameras and battery-operated recorders
 - Specialized equipment that may be required for certain hazards, such as a hazardous materials incident

Once the initial equipment has been acquired, you should have SOPs in place that address maintenance and acquisition of backup operating equipment and supplies.

 **Task Assignment** 

Obtain copies of any life support SOPs and those related to operating equipment and supplies. Review these SOPs and identify other SOPs that are required. Develop a list and bring it to the EOC Management and Operations course.

**Maintenance
Contracts**

Inspection and maintenance schedules are used to ensure that all equipment is in operating condition when needed. You don't need an elaborate system to keep track of inspection and maintenance schedules, but it is important to have some type of system in place to monitor compliance with these schedules.

If you have access to a computer, you should use a database tracking system for developing and maintaining the schedules. Any scheduling system you use should contain the following elements:

- Description of equipment, including model number, serial number, and manufacturer
- Vendor(s) name, address, and phone number
- Contract number and account information
- Date equipment was purchased or leased
- Last scheduled inspection/maintenance
- Next scheduled inspection/maintenance
- Expiration date of contracts

If maintenance contracts are not in place for critical pieces of equipment, arrangements should be made to secure them. You can purchase the equipment or other type of resources, or you can establish memorandums of understanding to ensure that you can acquire the equipment during an emergency.

Memorandum of Understanding (MOU) and Mutual Aid Agreements

A memorandum of understanding (MOU) is an agreement between agencies (internal and external) located within the jurisdiction on cooperative efforts and services which would be provided during a disaster. The agencies involved usually maintain command of their personnel while providing specific services to the community at large and in conjunction with the normal resources available in the community.

For example, a U.S. Forest Service District Office may agree to provide communications support to the community where it is located.

Mutual-aid agreements ensure that you have resources and logistical support available to assist you in managing a disaster. They must be written in accordance with existing State law and local ordinances. They should include a discussion of free access across boundaries, command of resources and staff, compensation for workers, staff support provision, and insurance.

Some States have master mutual-aid agreements to which local jurisdictions may subscribe.

These agreements should be reviewed on a regular basis to ensure currency and that the terms are still in effect.

Records and Documents Retention

It is virtually impossible to accurately and properly complete the necessary recordkeeping after disaster emergency work has been done and a period of time has elapsed. Therefore, the importance of prompt, efficient recordkeeping cannot be overemphasized. You must know what records to keep, how to keep them, and have someone familiar enough to start keeping these records at the onset of an emergency situation.

If the situation develops into a major disaster declaration, proper documentation will be needed to justify local expenditures for which reimbursement will be requested. Without proper recordkeeping, the EOC could lose considerable sums of money because of claims for reimbursement cannot be justified. Accurate documentation will also be needed to justify expenditures for which reimbursements will not be requested.

Most EOC records retention and archiving falls into one of the following categories:

- Survivable records and databases needed to conduct emergency operations
- Survivable records needed to reconstitute the government and for recovery
- A continuity-of-government plan, including an approved succession plan

✓ Survivable Records and Databases Needed to Conduct Emergency Operations

It is essential that the information requirements for disaster response in your State and local community be identified and catalogued. Primary and alternate EOCs should contain the information databases and records necessary to sustain emergency operations, with provisions made for backups of this data.

Although information needs will vary from jurisdiction to jurisdiction, there are general categories of information that each EOC should maintain.

For each type of record, listed in the table below, the relevant information on contact persons, procedures for contact and alternatives, location, purpose, and other appropriate information should be organized so that it is easily accessible in an emergency.

Types of Emergency Operations Records for Retention		
Alerting	Sheltering	Debris removal
Notification	Transportation	Damage assessment
EOC activation	Food and water supply	Disaster assistance
Evacuation	Medical assistance	Public information

✓ Survivable Vital Records Needed to Reconstitute the Government and for Recovery

The State, in collaboration with local jurisdictions, must have a system for secure storage of vital records necessary to reconstitute the government and to conduct recovery efforts. CPG 1-10 provides criteria for ensuring that both records needed to respond to a crisis and those needed to reconstitute government after a crisis are safely maintained.

✓ **A Continuity of Government Plan, Including an Approval of Succession**

Lines of succession, pre-delegations of authority, and other preparedness and planning measures are integral to an emergency management program, but they are often neglected. FEMA can provide assistance on the development of lines of succession for critical positions within your State or territory. In addition, CPG 1-10 provides recommended actions and discusses the essential emergency requirements common to all States and territories, regardless of the nature of the hazards they face.

Summary



In this module, you learned the following:

- The purpose of an emergency operations plan as it relates to EOC operations,
 - How the hazards/vulnerability analysis relates to the design of the EOC, and
 - The factors you need to consider when developing SOPs for communications systems, life support, operating equipment and supplies, memorandums of understanding and mutual aid agreements, and records documentation and retention.
-

The final examination is presented at the end of the course materials.

Glossary

Glossary

Capability Assessment	Provides information designed to help the planning team evaluate preparedness, mitigation (prevention), and response resources and capabilities. Includes an assessment of community and industry response capabilities.
Coordination	The process of systematically analyzing a situation, developing relevant information, and informing appropriate personnel of viable alternatives for selection of the most effective combination of available resources to meet specific objectives.
Emergency Alerting System	A communication and warning system set up by the Federal government in order for emergency messages to be broadcast via radio and TV stations.
Emergency Management	Organized analysis, planning, decision making, and assignment of available resources to mitigate, prepare for, respond to, and recover from the effects of all hazards.
Emergency Management Exercise	A structured activity that simulates an actual emergency management operation for a specific purpose.
Emergency Operations Center	A pre-designated facility established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an agency. The Emergency Operations Center is often referred to as the Emergency Operating Center.
Emergency Operations Plan	A document describing how citizens and property will be protected in a disaster or emergency.
Emergency With Warning	An impending situation that allows some time for strategic planning, such as a flood, tornado, hurricane, or international crisis.
Emergency Without Warning	Unanticipated or unplanned for emergencies such as earthquakes, terrorist attacks, or hazardous materials incidents.
Hazards Analysis	Identifies potential hazards, estimates how serious they are, and establishes planning priorities. Provides a factual basis for planning and the necessary documentation for planning and response efforts.
Hazards Identification	Provides information on situations that have the potential to cause injury or damage.
Message Center	Receives, records, and routes information about the emergency.

Mitigation	The actions you take to prevent disasters or to reduce the damage caused by hazards that cannot be avoided.
Mutual Agreement	A written agreement between agencies and/or jurisdictions in which they agree to assist one another, upon request, by furnishing personnel and equipment in an emergency situation.
Normalcy	A period when no emergency is taking place or anticipated.
Preparedness	The actions you take and plans you make before an emergency to protect yourself and to help you respond safely.
Public Information Officer	Individual responsible for interfacing with the media or other appropriate agencies requiring information.
Recovery	The actions you take to put your property and your life back to normal after an emergency or disaster.
Response	The actions you take during an emergency to protect yourself; these should be your preparedness plans put into action.
Responsiveness	The ability to ensure that information is communicated to those who need it in an evolving emergency situation.
Resources	All personnel and major items of equipment available, or potentially available, for assignment to incidents. Resources are described by kind and type, e.g., ground, water, air, etc.
Risk Analysis	Assesses the probability of injury or damage due to a hazard and estimates the actual damage that may occur.
Security	Protects against damage or unauthorized access or use.
Staging Area	A temporary location where personnel and equipment may be assigned.
Standard Operating Procedures	Guidelines for operating procedures in an emergency; includes equipment, processes, and methods.
Survivability	Ensures a high probability of the system's continued operation during and after a disaster.
Transportability	Allows movement of systems from one location to another with relative ease and speed while maintaining operational capacity.
Vulnerability Analysis	Identifies who or what in the community is susceptible (vulnerable) to damage if an accident occurs.

Resources

Resources

The following agencies could offer some assistance:

- **Emergency Management Institute (EMI).** Provides training to enhance U.S. emergency management practices through a nationwide program of resident and non-resident instruction.
- **The Learning Resource Center, Emergency Management Institute.** Provides current information and resources on emergency management and related subjects, supplementing classroom lectures and materials. The center houses a collection of over 50,000 books, periodicals, and research documents, as well as audio-visual materials such as films, videotapes, slide/tape programs, and microfiche.

Although library materials do not circulate off campus, the staff does make available photocopies of journal articles and research papers for individuals requesting information. The Learning Resource Center provides limited reference and referral services in response to telephone and mail requests.

- **National Fire Academy.** Through its courses and programs, the National Fire Academy works to enhance the ability of the fire service and allied professions to deal more effectively with fire and related emergencies.
- **Emergency Education NETwork (EENET).** A Federal Emergency Management Agency (FEMA) video-conferencing project that is used for training and informational purposes. Anyone with access to a C-band antenna can participate, and videotapes of each broadcast are available for loan from FEMA Regional Offices and from each State Emergency Management Office.
- **FEMA Regional offices.** (see regional map at the end of the Reference Section).
- **State Emergency Management Agency.**

References

References



The following reference materials are available from the Federal Emergency Management Agency Publications Office.

Federal Emergency Management Agency Civil Preparedness Guides – Series I

CPG 1-5	Objectives for Local Emergency Management (July 1984)
CPG 1-6	Disaster Operations: A Handbook for Local Governments (July 1981)
CPG 1-8	Guide for the Review of State and Local Emergency Operations Plans (September 1990)
CPG 1-10	Guide for the Development of a State and Local Continuity of Government Capability (July 1987)
CPG 1-14	Principles of Warning and Criteria Governing Eligibility of National Warning Systems (GNAWS) Terminals (November 1981)
CPG 1-20	Emergency Operating Centers Handbook (May 1984)
CPG 1-35	Capability and Hazard Identification Program for Local Governments—Workbook (April 1992)
CPG 1-37	State and Local Communications and Warning Systems Engineering Guidance (September 1984)
CPG 1-40	Emergency Broadcast System (May 1991)

Hazardous Materials Contingency Planning Course: Risk Assessment/Vulnerability Users Manual for Small Communities and Rural Areas (SM 111A, July 1987, U.S. Department of Transportation).

Emergency Planning Job Aid Manual (SM.235.1, September 1991, FEMA).

Principal Threats Facing Communities and Local Emergency Management Coordinators (FEMA-191, April 1992).

Risks and Hazards: A State-by-State Guide (FEMA-196, September 1990).

Curriculum Guide

Curriculum Guide

The following list of courses is provided for your reference. These courses are available through your local or State offices. You should check with your supervisor or training officer for details on enrollment and class schedules.

State and Local Courses

Exercise Design Course (G120)

This 2 ½-day course provides knowledge and develops skills that will enable you to train a staff and to conduct an exercise that will test your community's plan and its operational response capability.

Exercise Evaluation Course (G130)

This 2-day course provides you with the knowledge and skills to manage exercise evaluation activities before, during, and after an emergency management exercise.

Emergency Planning Course (G235)

This 4 ½-day course seeks to improve planning skills and promote the preparation of integrated emergency management plans.

Incident Command System/Emergency Operating Center (ICS/EOC) Interface (G191)

This 2 ½-day course reviews the ICS and EOC models of emergency management operations, including coordination, communication, and chief executive decision making knowledge of comprehensive, all-hazards emergency management. (Also offered as a resident course).

Introduction to Emergency Management (G230)

This 4 ½-day course examines the need for an emergency management system and the importance of an integrated approach to managing emergencies.

Basic Skills Emergency Program Management (G240)

This course is designed for emergency management officials and their staff. The content reinforces existing management skills and introduces management skills required for building an emergency management system. The modules in this course are: Leadership and Influence, Decision Making and Problem-Solving, and Effective Communications.

Resource Management (G276)

This 2-day course is designed for those persons assigned responsibilities for resource management. It covers resource needs assessment and analysis, developing resource management SOPs using job aids, and implementing the resource management system.

Independent Study Courses

Emergency Program Manager: An Orientation to the Position (IS-1)

This independent study course provides an introduction to Comprehensive Emergency Management and the Integrated Emergency Management System. Included is an in-depth look at the four phases of comprehensive emergency management: mitigation, preparedness, response, and recovery.

Emergency Preparedness, USA (IS-2)

This independent study course contains information about natural and technological hazards and national security issues. Participants are led through the development of emergency preparedness plans and are encouraged to become involved in the local emergency preparedness network. This text is accompanied by illustrations, maps, charts, and diagrams.

Portable Emergency Data System (PEDS) (IS-6)

This course provides hands-on computer training on the use of the Portable Emergency Data System (PEDS). Radio communicators will learn how to use PEDS as a planning tool to support specific emergency communications.

A Citizens' Guide to Disaster Assistance (IS-7)

This course provides a basic understanding of the roles and responsibilities of the local community, State, and Federal government in providing disaster assistance. It is appropriate for both the general public and those involved in emergency management who need a general introduction to disaster assistance.

Appendix A

LIBERTY COUNTY HAZARD/VULNERABILITY ANALYSIS

GENERAL DESCRIPTION

Liberty County is primarily a rural, agricultural county of 284,912 people. There are nine incorporated communities in the county: Apple Valley, Blue Water, Central City, Deep River, Fisherville, Gold Mine, Harvest Junction, Jasper, and Kingston.

POPULATION

The population of the county has been recorded by the United States Commerce, Bureau of the Census, as follows:

1985 (est.)	1980	1970	1960	1950
284,912	276,401	247,251	219,641	184,073

GOVERNMENT

Liberty County Government

The governing body of Liberty County is the Board of Supervisors, consisting of five supervisors. The members of the board are elected at large for staggered four-year terms and serve on a part-time basis. The board elects a president to direct meetings. It also selects a county manager to serve at its pleasure. The Columbia State Constitution specifies that counties elect the following 11 county officials (although the law makes allowances for county size):

- Five supervisors,
- Sheriff,
- Recorder of deeds,
- Clerk of courts,
- District attorney,
- Treasurer, and
- Controller.

Other officials are provided for by statute.

The County Courthouse is located in the Palmer Building at X and 19th Streets.

Central City Government

The government of Central City is the council-manager form with seven councilmembers making up the legislative body. The council is elected at large on a nonpartisan ballot for four-year terms. It elects one of its own members as mayor to preside over meetings and to vote on matters before the council, but the mayor has no veto power. The manager, who is the chief administrative officer of the city, is selected by the council and serves at its pleasure. The manager carries out the ordinances of the council, makes recommendations to the council, prepares and executes the annual

budget, negotiates with labor unions, and appoints and removes department heads and other administrative personnel. The manager has no vote in council meetings.

City Hall is located at Z and 21st Streets.

TRANSPORTATION

Highways

The county is divided north/south by Interstates 107 and 101 and east/west by State Highway 5. State Highway 68 intersects with Interstate 107 at Deep River; runs east to Kingston; traverses the ridges of Imperial Mountain; and turns north, connecting the cities of Jasper, Harvest Junction, and Gold Mine.

Railroads

The Great Atlantic and Pacific Railroad operates two lines within Liberty County. The line running east/west, paralleling State Highway 5, is both a passenger and a freight route. There are three passenger trains per day scheduled through Central City-7:30 a.m., noon, and 5 p.m. There are four freight trains scheduled during the late evening and mid-morning hours. The line running from Mason to Fisherville to Kingston is strictly a freight line, hauling mining machinery and material.

Airport

The Liberty County Regional Airport is centrally located within the state and is capable of handling large passenger and cargo planes. With runways of 8,000 feet and 4,000 feet, Regional Airport has the capability of serving all but the largest commercial aircraft in use.

The main lines serving Liberty County are Linx Airlines and Atlantic Airlines. Direct flights are available to Washington, D.C.; New York; Atlanta; Memphis; St. Louis; New Orleans; and Mobile.

During 1985, there were approximately 12,000 departures from Regional Airport with 110,796 passengers boarding flights. Additionally, 175,000 pounds of mail and 1,750,000 pounds of freight were handled at the facility.

LIBERTY COLISEUM AND CONVENTION CENTER

The Convention Center was completed in 1980 and accommodates the Lightning semiprofessional basketball team, the Pounders semiprofessional hockey team, and the Liberty Regional Concert Orchestra. The Convention Center has 95,000 square feet of usable floor space with 350 exhibit booths and meeting space for 8,000 people. For sporting events, it can be arranged to seat 12,000 people and has parking facilities for 3,000 cars. The Convention Center is located at the intersection of Route 68 and 1-101, one mile east of Kingston.

EMPLOYMENT

<u>Residence-Based Employment</u>	<u>1985</u>	<u>1984</u>	<u>1983</u>	<u>1982</u>	<u>1981</u>
1. Civilian Labor Force	98,490	98,430	98,890	96,930	96,290
2. Unemployed	10,045	8,366	8,207	7,657	8,569
Percent of civilian labor force	10.2	8.5	8.3	7.9	8.9
3. Employed	88,445	90,064	90,683	89,273	87,721
a. Nonagricultural wage and salary workers	64,595	65,712	66,813	65,353	63,786
b. Other nonagricultural workers	12,520	13,012	12,540	12,570	12,555
c. Agricultural workers	11,330	11,340	11,330	11,350	11,380
<u>Establishment-Based Employment</u>					
1. Manufacturing (total)	12,382	12,608	12,695	12,498	12,280
2. Nonmanufacturing	77,000	77,900	78,000	77,000	76,000
a. Mining	4,924	4,896	4,890	4,950	4,940
b. Construction	3,939	3,930	3,936	3,990	3,900
c. Transportation and public utilities	4,432	4,550	4,540	4,600	4,486
d. Wholesale and retail trade	19,698	19,760	19,770	19,840	19,665
e. Finance, insurance, and real estate	4,136	4,030	4,050	4,045	4,131
f. Service and miscellaneous	19,993	19,773	19,770	19,820	19,690
g. Government	25,547	26,004	25,970	25,420	24,905

MAJOR EMPLOYERS

The following is a partial listing of the county's major employers, their products or services, and their number of employees:

	<u>Employees</u>	<u>Product</u>
Liberty Nuclear Power Company	1,039	Electricity
Central City Hospital	650	Medical Facility
Faith Hospital	620	Medical Facility
Columbia Veterans, Hospital	564	Medical Facility
Liberty National Bank	629	Financial Institution
Dupont Chemical	4,243	Missile Fuel
Huge Mining Company	5,010	Coal
Lance Glass Company	350	Glass/Bottles
Colonial Baking Company	206	Baking
Great Grapes Winery	201	Wine
Happy Times Nursing Home	198	Care for the Aged
Columbia State Prison	500	State Prison
Columbia State University	870	Educational Facility
Farmers A&M College	559	Educational Facility
Palumbo Plastics Company	217	Plastics
Fay Fertilizer Company	250	Fertilizer
Dorsey Drug Company	510	Medicine
Columbia Telecommunications, Inc.	203	Telephone

EDUCATIONAL FACILITIES

The county encompasses five school districts including Liberty County School District, Central City Municipal Separate School District, Fisherville Municipal Separate School District, Harvest Junction Municipal Separate School District, and Kingston Municipal Separate School District.

Columbia State University, located in Central City, has an annual enrollment of 15,000 students.

The county's public school enrollment from 1980-81 to 1984-85 is as follows:

<u>Year</u>	<u>Enrollment</u>
1984-85	22,406
1983-84	22,901
1982-83	22,911
1981-82	22,985
1980-81	23,173

Day care centers:

<u>Year</u>	<u>Enrollment</u>
1985-86	2,653
1984-85	1,860
1983-84	1,400
1982-83	700

SCHOOL NAMES AND LOCATIONS IN LIBERY COUNTY

<u>Name</u>	<u>Location</u>	<u>Enrollment 1981</u>
U.S. Grant High School	T and 14th Streets, Central City	1,300
Collins Elementary School	CC and 30th Streets, Central City	500
Jefferson Davis High School	I-107 and 32nd Street, Fisherville	1,000
Brooks Jr. High School	O and 11th Streets, Fisherville	800
Learned Elementary School	O and 28th Streets, Fisherville	300
Roosevelt Elementary School	L and 12th Streets, Fisherville	300
Coolidge Union Elementary	S and 23rd Streets, Fisherville	400
Truman Elementary School	Q and 21st Streets, Central City	400
Simmons Jr. High School	HH and 14th Streets, Kingston	800
Goldfinger Elementary School	O and 33rd Streets, Kingston	400
Graham Elementary School	II and 35th Streets, Kingston	300
Hoover Sr. High School	LL and 22nd Streets, Central City	600
Watts Jr. High School	T and 10th Streets, Harvest Junction	400
Kidd Elementary School	C and 8th Streets, Harvest Junction	400
Harvest Valley Day School	HH and 33rd Streets, Central City	800
Eisenhower Elementary School	O and 37th Streets, Central City	1,000
Holy Cross Elementary School	OO and 18th Streets, Central City	300
Wilson Elementary School	L and 3rd Streets, Central City	200
Kennedy Elementary School	S and 38th Streets, Central City	456
St. Xavier Jr. High School	CC and 3rd Streets, Central City	700
McNamara High School	I-107 and 18th Streets, Central City	800
Kingston Area High School	RD #2, Kingston	900
Hanover High School	RD #2, Harvest Junction	800
Price Elementary School	RD #1, Gold Mine	200
Nye Jr. High School	RD #1, Gold Mine	400
Liberty High School	RD #1, Apple Valley	1,200
Apple Valley Elementary School	B and 12th Streets, Apple Valley	550
Blue Water Elementary School	C and 3rd Streets, Blue Water	500
Liberty Elementary School	C and 16th Streets, Blue Water	450
King Jr. High School	G and 10th Streets, Apple Valley	950
Simon Elementary School	C and 17th Streets, Apple Valley	400
Harris High School	O and 29th Streets, Central City	1,200
J. D. Lerew Jr. High School	I and 11th Streets, Central City	1,000
Central City Jr. High School	AA and 19th Streets, Central City	650
McGraw Elementary School	HH and 11th Streets, Central City	450
Thomas Elementary School	T and 2nd Streets, Central City	500
McMinn Elementary School	D and 16th Streets, Kingston	100

Columbia State University is located at MM and 30th Streets, and Farmers A&M College is located at GG and 2nd Streets, Central City.

DAY CARE CENTERS IN LIBERTY COUNTY

<u>Day Care Centers</u>	<u>Location</u>	<u>Enrollment</u>
Upper Valley	KK and 26th Streets, Central City	100-125
Midland	U and 2nd Streets, Central City	50-75
Grassline	Lan & 7th Streets, Central City	150-250
Overbrook	G and 11th Streets, Central City	100-130
Leemore	W and 27th Streets, Central City	100-130
Sunnyside	H and 4th Streets, Central City	70-90
Happy Valley	S and 4th Streets, Central City	100-130
Funny Farm	FF and 30th Streets, Central City	100-130
Penn Brook	G and 6th Streets, Central City	50-70
Scidmore	F and 7th Streets, Central City	15-25
Alice's	F and 20th Streets, Central City	100-130
Lima	Route 68, Kingston	100-130
ABC	Route 68, Harvest Junction	100-130
Hickory	D Street, Harvest Junction	100-130
Dickory	1200 A Street, Jasper	15-30
Dock	1430 B Street, Gold Mine	25-30
School Day	100 A Street, Fisherville	100-130
Great Care	650 C Street, Deep River	100-120
Sunny Brook	1950 X Street, Apple Valley	20-30
Garden Hooks	1555 D Street, Blue Water	10-13
Garden Top	149 K Street, Fisherville	150-250
Smithwich	1600 A Street, Fisherville	150-250
Dunmore	425 AA Street, Fisherville	75-100
Topside	1100 G Street, Kingston	50-75
Garden Grove	600 B Street, Harvest Junction	100-130

POPULATION DISTRIBUTION OF LIBERTY COUNTY

<u>City</u>	<u>Population</u>
Apple Valley	5,000
Blue Water	4,000
Central City	149,000
Deep River	12,000
Fisherville	23,000
Gold Mine	6,000
Harvest Junction	18,000
Jasper	5,000
Kingston	13,000
<u>Unincorporated Areas</u>	<u>49,000</u>
Total	284,000

OTHER FACILITIES AND THEIR LOCATIONS

<u>Nursing Homes</u>	<u>Location</u>	<u>Average Patient Load</u>
Lower Allen	B and 23rd Streets, Central City	250
Happy Times	N and 1st Streets, Central City	100
Hill Top	J and 33rd Streets, Central City	250
Riverside	EE and 29th Streets, Central City	200
Liberty	S and 29th Streets, Central City	150
Columbia	O and 11th Streets, Central City	150
Green	MM and 27th Streets, Central City	100
Garden Run	T and 35th Streets, Central City	250
Turkey Hill	AA and 14th Streets, Fisherville	100
Harvest Junction	F and 12th Streets, Harvest Junction	100
Kingston Center	B and 3rd Streets, Kingston	150
Sunshine	C and 11th Streets, Deep River	150

Hospitals

Central City Hospital	East of D Street, between 31st and 34th	199
Faith Hospital	S and 14th Streets, Central City	110
Levine Hospital	MM and 17th Streets, Central City	43
Fisherville General	S and 1st Streets, Central City	44
Harvest Junction Community	C and 3rd Streets, Harvest Junction	35
Columbia Veterans	J and 7th Streets, Central City	100

Mobile Home Parks

Roaring River Mobile Home Park	Interstate 107, Central City	75 mobile home sites
Route 5 East Mobile Home Park	Route 5, 2 miles east of Central City	100 mobile home sites

CENTRAL CITY
POPULATION DENSITIES

Single Family

<u>Location</u>	<u>Population</u>
1. NN east to SS street, 24th north to O street	6,425
2. II east to SS street, 32nd north to 26th street	3,175
3. DD east to HH street, 41st north to 32nd street	2,250
4. I-107 east to N street, 39th north to 26th street	3,425
5. A east to F street, 24th north to O street	8,175
6. FF east to NN street, 9th north to O street	4,200
7. A east to I-107, 30th street north to 26th street	<u>1,750</u>
	29,400

Multi-residential

1. A east to I-107, 39th north to 30th street	7,550
2. J east to BB street, 10th north to O street	14,325
3. N east to X street, 41st north to 26th street	12,775
4. FF east to NN street, 20th north to 9th street	<u>8,250</u>
	42,900

Residential/Commercial

1. X east to DD street, 41st north to 26th street	14,650
2. R east to BB street, 20th north to 10th street	<u>17,850</u>
	32,500

Residential/Commercial/Industrial

1. R east to BB street, 24th north to 20th street	9,525
2. FF east to NN street, 24th north to 20th street	<u>7,775</u>
	17,300

Commercial

1. FF east to J street, 24th north to O street	6,550
2. BB east to FF street, 24th north to O street	<u>8,775</u>
	15,325

Industrial

1. J east to Q street, 24th north to 10th street	5,500
2. A east to SS street, 26th north to 24th street	<u>4,500</u>
	10,000

Urban Renewal

1. DD east to II street, 32nd north to 26th street	<u>1,575</u>
	1,575

CENTRAL CITY CONSTRUCTION TYPE

<u>Construction</u>	<u>Description</u>
Single family dwellings	Predominantly wood frame with some unreinforced masonry structures. No significant later support at the foundations; cripple stud foundations.
Multi-family dwellings	Predominantly wood frame for the smaller units. For larger units in the older part of the city, mainly unreinforced masonry. Larger units in the newer part of the city are either reinforced concrete or steel frame.
Industrial buildings	In the older parts of city, unreinforced masonry. In the newer parts, a mix of reinforced concrete, steel frame and tilt-up wall structures.
Commercial buildings	In the older parts of the city, low rise commercial buildings either unreinforced masonry or wood frame. High-rise buildings in these areas are unreinforced masonry. In newer parts of the city, low-rise buildings are reinforced concrete or steel frame.

ATTACK/RISK-AREA IDENTIFICATION

Predictability of enemy attack is based on an assessment of international tension and world events. Liberty County is listed as a risk area because of its proximity to the Lober Military Base.

Frequency of enemy attack is limited to historical events.

Controllability of enemy attack is vested with the federal government. Federal organizations have shelters, resources, and personnel for the four phases of attack activity. State and local governments have preparedness, response, and recovery capability, but local government must deal with initial response alone until outside help is mobilized.

Duration of enemy attack could be from a period of a few minutes, if the incident is nuclear, to weeks or months if it is conventional, biological, or chemical in nature.

Scope of damage of an enemy attack would be widespread, if not nationwide. Life, property, and the economy would be affected.

Intensity of impact would be widespread, if not nationwide. Life, property, and the economy would be seriously impaired.

HURRICANE

Predictability of a hurricane in Liberty County is certain, based on the past experience of several major storms, including Hurricane Emily in 1973, the most devastating one ever recorded. Minimum daylight warning time for hurricane landfall is 12 hours.

Frequency of a major hurricane historically has been one every ten years. Minor storms can be expected as often as every year.

Controllability of hurricane damage is limited to the mitigation measures of building codes, land-use management, and setback and elevation criteria.

Duration of the actual onslaught is from several hours to several days, depending upon the forward movement of the hurricane. The duration of the aftereffects varies with the severity of the storm and can range from several days to several years.

Scope of damage ranges with the severity of the hurricane, from minimal damage to nearly total destruction of community facilities.

Intensity of impact ranges with scope of damage.

FLOOD

Predictability of flooding on the Roaring River, the Towalomie River, and the Swatara Creek is enhanced through the rain gauge system and staff gauge installation established in 1986, owned and monitored by the Department of Emergency Management.

Frequency of moderate flooding is at least once a year; major flooding is generally limited to once in five years. A severe flood in 1985 killed 28 people, injured 656, caused the evacuation of 75,000, and destroyed 23 mobile homes.

Controllability of flood damage is limited to mitigation measures of land-use management and elevation criteria.

Duration of actual onslaught is from several hours to several days.

Scope of damage ranges with severity of flooding.

Intensity of impact ranges from a few houses with water damage to several hundred houses involved, including road washouts and bridge damage.

HAZARDOUS-MATERIALS ACCIDENT

Predictability of a hazardous-material accident is uncertain, however, hazardous materials are commonly used, transported, and produced in Liberty County in quantities which, if released into the environment during an accident, could be harmful or injurious to humans, animals, property, and the economy.

Frequency of a hazardous-material accident ranges from five or more minor incidents a year to one of major consequence every five years.

Controllability of a hazardous-material disaster is limited to local plans, zoning, and training of response and management forces.

Duration of an incident can be for as little as a few minutes to as long as several days or weeks.

Scope of damage ranges with the severity of the incident but is generally localized.

Intensity of impact ranges with the scope of damage.

HIGH-PRESSURE GAS LINE BLOWOUT

Predictability of incident is uncertain; however, high-pressure lines are outlined in the oil and gas lines of the State Oil and Gas Board map and the Transcontinental Natural Gas Lines map.

Frequency of blowout is limited to two incidents in the last two years, both of which were minor in scope.

Controllability of a hazard is limited to the mitigation efforts of the industry, the state and federal regulation books, and local planning for warning and response.

Duration of an incident is generally short in nature, limited to no more than several hours.

Scope of damage is generally limited, except for evacuation.

Intensity of impact ranges with scope of damage in relation to location.

EARTHQUAKE

Predictability of an earthquake in Liberty County is limited to early history (1911) and knowledge of tectonic studies. The county is vulnerable to the Apple Valley Fault Zone.

Frequency of earthquake activity is limited to a few minor tremors, detectable only by instrumentation, and activity noted in the 1911 Apple Valley quake and again in 1959.

Controllability of earthquake damage is limited to local plans and building codes.

Duration of earthquake damage can be from a few minutes to long period of time.

Scope of damage ranges with the severity of the quake.

Intensity of impact ranges from minor impact to major damage.

TORNADO

Predictability of tornadoes in Liberty County is uncertain.

Frequency of a major tornado, based on past history, is approximately one every ten years, with two or three minor occurrences yearly.

Controllability of tornado damage is limited to local plans and building codes.

Duration of actual onslaught is relatively short.

Scope of damage ranges with the severity of a tornado, varying from moderate to total destruction.

Intensity of impact ranges with scope of damage.

FUEL SHORTAGE

Predictability of a fuel shortage is based on the condition of world events and international tension.

Frequency of a fuel shortage is limited to historical events.

Controllability of a fuel shortage is limited to the mitigation measures of conservation and rationing.

Duration of a fuel shortage could be from a few days to several years.

Scope of damage would be widespread, affecting life, property, and the economy.

Intensity of impact of a fuel shortage is that life, property, and the economy would be seriously impaired.

FIXED NUCLEAR FACILITY INCIDENT

Predictability of a fixed nuclear facility incident is uncertain. The Edison Electric Company has operated the Blue Water Nuclear Power Plant for ten years. During this period, there have been ten incidents classified as unusual events in addition to three alerts. The plant is located 7 miles north of Central City on Interstate 107.

Frequency of a fixed nuclear facility incident above the classification level of an alert is estimated at one in 30 years.

Controllability of a fixed nuclear facility incident is limited to operator training and maintenance/safety programs at the facility.

Duration of actual onslaught could range from hours to days.

Scope of damage ranges from the sheltering of people in homes to evacuation of Liberty County and interdiction of the 50-mile food ingestion pathway.

Intensity of impact ranges with scope of damage.

DAM

Predictability of a dam failure is based upon inspections by the Army Corps of Engineers and its classifications of dams. Liberty County has one earthen dam classified as red (East Lake Dam).

Frequency is limited to historical events and projection of dam failure based on current conditions.

Controllability of a dam failure is based on inspection/compliance programs.

Duration of failure onslaught would be rapid, causing flooding of a major portion of the northwest section of Central City.

Scope of damage ranges from minor flooding to flooding of several hundred homes and businesses.

Intensity of impact ranges with scope of damage.

AIRCRAFT ACCIDENT

Predictability of an aircraft accident is based upon increased air traffic, unpredictable windshear conditions, and other unknown contingencies.

Frequency of aircraft accidents historically has been three in ten years, two of which were minor incidents.

Controllability of aircraft accidents is limited to mitigation measures of air traffic control, land-use management of landing and takeoff approach, and the state of readiness of local response services.

Duration of an incident can range from as short as a few minutes to as long as several days or weeks.

Scope of damage ranges with the intensity of the accident but is always localized.

Intensity of impact ranges with the scope of damage in relation to location.

***Answer Key:
The Role of the Emergency
Operations Center***

ANSWERS

1. What roles does an EOC perform that can save lives and properties?

The roles are: disaster planning and disaster recovery as well as coordination during response to an emergency.

2. During a disaster, response operations must be run efficiently and in a coordinated manner. How does an EOC help achieve such a response?

Response efforts are centralized and coordinated.

3. If individual departments can handle certain emergencies, why is an EOC necessary?

Although certain disaster can be handled without the assistance of an EOC, many more disaster situations require responses that overwhelm the resources of individual departments, agencies, or even entire communities.

Centralization and coordination through an EOC help to focus the efforts of community decision makers in an environment in which staff share the same information, can monitor the situation, provide rapid decisions, and reach consensus on relief efforts that go beyond agency and departmental boundaries.

4. The videotape pointed out the key role that communications play in the operation of an EOC. How is the communications function organized in an EOC?

Communications is usually centered around police and fire and rescue communications centers located in municipal buildings. In-place communications personnel and equipment provide communications between personnel in the EOC and those at the scene(s).

5. What term does the videotape use to identify the individual in charge of the EOC?

The EOC Operations Chief. Keep in mind that different communities may use different titles for this person, but the function would be the same. In this course, we use the term “EOC Manager”.

The EOC manager has primary responsibility for the overall operations of the EOC prior to, during, and after EOC activation. He/she coordinates staffing and planning, which serves to ensure adequate disaster response.

6. Many disasters last several days. If you were the EOC manager, how would this affect your staffing decisions?

You would have to be certain that all EOC staff positions were filled with primary (initial call-out) personnel and back-up personnel. You would ensure that all disaster planning related to the EOC identified shift schedules and shift change procedures that would result in uninterrupted EOC operations 24 hours daily during a disaster. Staffing is covered in WEMs II and III.

7. Under what circumstances would an EOC be activated in advance of a disaster? Would all personnel be called up initially?

Weather conditions such as a severe storm “watch” or “warning” may dictate to the EOC manager that the EOC be activated in advance of an actual disaster. The Standard Operating Procedures for the EOC identify call-out procedures and the personnel who would be mobilized. Not all personnel would be called out unless the person with the statutory authority to activate the EOC believed a total call-out prior to an actual emergency was necessary—an unusual occurrence.

8. Besides personnel, what are some of the resources required to keep an EOC functioning?

Resources include communications and electrical power generation equipment (primary and backup), ventilation and water supplies, adequate food supplies, and arrangements for sleeping. The potential need to operate for an extended period means that communications and electrical equipment must be backed up, and feeding and sleeping arrangements must be planned. Due to the inability to predict the location of a disaster, it may be useful to store all backup equipment in a portable trailer.

Fuel and batteries must be kept stocked, and any food supplies must have a long shelf-life. If food and water are to be supplied by outside sources, these sources must be identified in the Standard Operating Procedures.

9. Given the critical role communications plays in the functioning of an EOC, what aspects of this vital resource must receive careful consideration?

Consideration must be given to the type and location of equipment available, the kinds of communications needed, protection of equipment, and equipment backup. In establishing an EOC, you must consider both voice and data communications. Equipment available today includes standard radio devices as well as FAX machines, teletype devices, and portable telephones.

Some EOCs use fixed equipment that under normal situations support police, fire and rescue operations. Other EOCs rely on portable communications equipment brought into the EOC only during disaster situations. Communications equipment (voice and data) must be protected against power surges and electromagnetic pulse (strong electronic surges sent out by nuclear blasts). Remember, always back up your primary method of communications.

Whichever method or equipment is used, it is crucial to be able to communicate with all levels of responders (local, State, Federal, and the private sector).

10. What purpose does a typical EOC Standard Operating Procedure serve?

The EOC Standard Operating Procedure (SOP) is the “game plan” for an EOC, serving as both a training document and an operational reference; identifying the EOC’s physical layout, functions, duties of EOC personnel, and operational plans and resources.

11. If you were asked to design an EOC, what design factors would be important?

The EOC should take advantage of existing communications centers, power supplies, conference rooms, and office spaces. A key factor is that the EOC should be safe from the effects of potential disasters that are most likely to hit a particular community. The EOC should be located with other emergency management activities (for example: police, fire, and emergency medical areas).

12. Coordinating disaster operations is key to an effective EOC. Does this require that all personnel be located in one space? Why or why not?

No. While it is desirable for the emergency response team to be located together to coordinate disaster response, certain EOC personnel can be located elsewhere as long as a reliable communication link is in place. For example, communications staff may be located in a communications center separate from the EOC operations center. Also, if a formal public information staff position exists, it may be better to locate this person away from the EOC to minimize public access to the EOC during a disaster.

13. What is the primary means for ensuring EOC personnel are always ready to respond to a disaster in your community?

The primary means for ensuring the readiness of EOC personnel is coordinated planning and training. EOCs must be exercised on a regularly scheduled basis. This means that all personnel with EOC assignments practice their EOC duties during full-scale exercises, and that their performance is observed and evaluated. State emergency management agencies can assist in EOC simulation exercises. Additionally, the EOC SOPs are useful as a training document, especially for new personnel.

14. If you do not have either an EOC or SOPs, who should be involved in planning to implement or establish an EOC and in writing the procedures?

Key emergency management personnel who may serve as EOC staff or who have a role in emergency response should be involved as well as a design engineer.

Your answers to the questions in the section, “What About Your Community’s EOC?” will vary.

Final Examination

FINAL EXAMINATION

Directions

Carefully read each question and all of the possible answers before you mark your answers on the answer sheet. There is only one correct answer for each test item. Mark all of your answers on the final exam answer sheet by properly filling in the appropriate space with a soft lead (#2) pencil.

Mark "A" for True or "B" for False for each of the following statements.

1. All EOCs must be designed according to the emergency operations center standard.
2. Location of the EOC must be based on an analysis of potential threats to the community since it must survive likely disasters.
3. It is seldom necessary to identify an alternate site for an EOC.
4. The emergency program manager (EPM) is involved more with emergency management, whereas the EOC manager is concerned with management and operations of the EOC.
5. There aren't any situations that would warrant activation of the EOC prior to an actual disaster.
6. A hazard identification involves determining the vulnerability of populations, structures, and land areas to hazards.
7. The emergency management phases (mitigation, preparedness, response, and recovery) have linear relationships.
8. Which of the following is not a role that can be performed by the EOC?
 - a. Disaster planning
 - b. Disaster recovery
 - c. Reimbursement for damages
 - d. Coordination during response to an emergency

9. Who has primary responsibility for the overall performance of the EOC prior to, during, and after EOC activation?
- a. EOC manager
 - b. Police chief
 - c. Mayor
 - d. Fire chief
10. Which document is the “game plan” for an EOC?
- a. Emergency Operations Plan
 - b. EOC Standard Operating Procedures
 - c. EOC’s organization chart
11. Is the EOC manager involved in staffing and planning of the EOC?
- a. No, it’s the responsibility of the administrative manager
 - b. It depends on whether the EOC manager has a personnel department
 - c. Yes, the EOC manager coordinates staffing and planning
- 12.–15. Identify the appropriate phase of emergency management associated with each of the following activities by filling in the space on the answer sheet under the letter that corresponds to the correct phase.
- a. Mitigation
 - b. Preparedness
 - c. Response
 - d. Recovery
12. ____ The EOC manager’s involvement in developing an Emergency Operations Plan.
13. ____ The EOC manager’s review of the hazard vulnerability analysis in developing plans for a survivable EOC.
14. ____ The EOC manager’s involvement in collecting funds expended during the disaster.

15. ____ The EOC manager's efforts to coordinate actions such as providing emergency assistance for casualties, including search and rescue.
16. Developing standard operating policies and procedures is important because:
- a. They help to ensure coordinated and responsive efforts in an emergency.
 - b. They're required by State and local law.
 - c. They help to uncover potential problems or resource shortages.
 - d. Both a and c.
17. Inspection and maintenance contracts are important because:
- a. They help to ensure that all equipment is in operating condition when needed.
 - b. They are used to determine when new equipment can be purchased.
 - c. They provide a system of checks and balances.
18. Records and documentation retention policies are important because:
- a. They are required for reimbursement.
 - b. They can provide accurate accounting of expenditures during an emergency.
 - c. They can be helpful in proving or disproving contractors' claims.
 - d. All of the above.

19. Documents between agencies that specify arrangements to provide services if a disaster occurs are often called:
 - a. Memorandums of Understanding
 - b. Maintenance Contracts
 - c. Non-binding agreements

 20. Life support systems may be regulated by:
 - a. Federal, State, and locally defined standards
 - b. The Administrative Procedures Board
 - c. Federal Emergency Management Agency
-