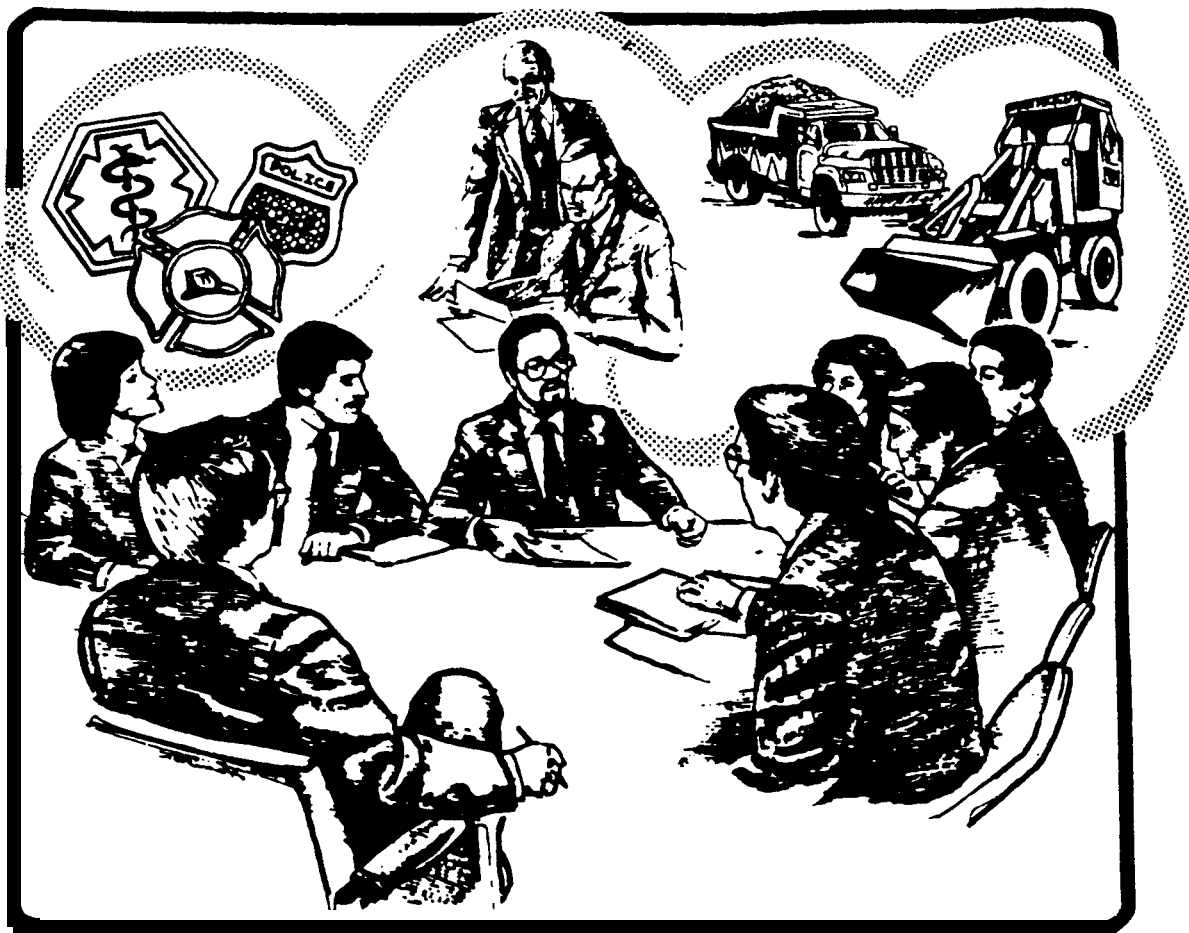


An Orientation to Community Disaster Exercises



**Federal Emergency Management Agency
Emergency Management Institute**

*An Orientation To
Community Disaster Exercises*

The Exercise Design Game

Independent Study Course
Workbook



Independent Study Workbook

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PLEASE READ THIS PAGE BEFORE STARTING THE VIDEO

Introduction

This Independent Study Course has been designed to provide an opportunity to learn about Community Disaster Exercises and introduce the skills required to successfully design exercises that test a community's disaster response capabilities. It is also a pre-requisite to the Exercise Design Course taught by your State Emergency Management Agency. Use the video as a quick review before you attend the class.

How to Use this Package

The video and workbook are a coordinated instructional package-intended to be used together.

The video is a stop-and-go presentation about 60 minutes in length. Every so often you will be directed to stop and do a pencil-and-paper activity in the workbook. Allow about five hours to complete the program.

The workbook consists of 15 workstop activities. You must complete all of these in order to understand the basic concepts. However, don't worry about perfection. The purpose at this point is awareness of basic principles. If you attend the Exercise Design course these concepts will be discussed in greater detail. Be prepared to share your ideas with other class members at that time. Also, make note of any questions you might have and bring them to the class.

In order to make the video-workbook activity a more productive experience, you may want to divide it into several learning sessions.

Topics

This workbook and video cover the following topics:

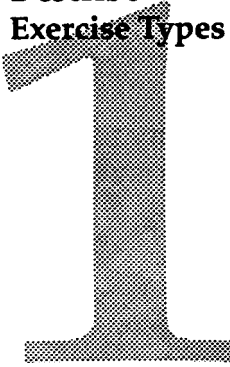
- Types of Emergency Exercises
- The Emergency Operations Center
- Exercise Requirements
- The Community Exercise Program
- The ExerciseDevelopment Process
- The Functional Exercise A Closer Look
- Eight steps in the exercise design process (Several workstops)
- A Preview of the Exercise Design Course

Start the video and play to stop 1

Independent Study Workbook

Types of Emergency Exercises

Workstop 1: Describe Exercise Types



Quite often Emergency Managers find it necessary to describe an exercise program to people whose cooperation and support are needed. The description may be an oral report, a formal written report, or a memo. For the sake of this workbook activity, assume that you have been asked to compose a memo to your mayor or county commission.

On the opposite page is a memo form describing exercise types to your mayor or commissioner. Fill in the blanks with actual information and data: your name, your mayor's name, and the date. Then compose a paragraph describing each of the exercise types.

Exercise Variables In writing your descriptions, it might be helpful to remember some of the exercise characteristic. These are FEMA definitions:

ORIENTATION:

- Informal
- No simulation
- Discussion of Roles and Responsibilities
- Introduction of Policies, Procedures, Plans, Responsibilities

DRILL:

- Single Emergency Response Function
- Single Agency Involvement
- Often a Field Component

TABLETOP:

- Informal Discussion of Simulated Emergency
- No Time Pressures
- Low Stress
- Useful For:
 - Evaluating Plans and Procedures
 - Resolving Questions of Coordination and Responsibility

FUNCTIONAL:

- Policy and Coordination Personnel Practice Emergency Response
- Stressful, Realistic Simulation
- Takes Place in Real Time
- Emphasizes Emergency Functions
- EOC is Activated

FULL-SCALE:

- Takes Place in Real Time
- Employs Real People and Equipment
- Coordinates Many Agencies
- Tests Several Emergency Functions
- Activate EOC
- Produces High Stress

Independent Study Workbook

MEMO

DATE: ,19

TO: Mayor

FROM:

I was pleased with our meeting last Tuesday and found it very useful. Your ideas were helpful in organizing the upcoming emergency exercise program.

At your request I have prepared this memo describing the five types of exercise activities we plan to incorporate into the program. Note that they progress in difficulty and complexity.

Orientation:

Drill:

Tabletop:

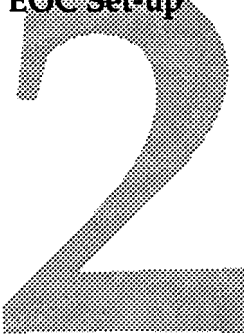
Functional:

Full-scale:

♦ *Restart the video and play to stop 2*

The Emergency Operations Center (EOC) ---

Workstop 2 Describe Your EOC Set-up



In full-scale and functional exercises, the EOC is activated. That is, the officials and support staff assemble at a central location for the activity.

The purpose of an Emergency Operations Center (EOC) is to provide a place where local government officials can do together what they cannot do separately. It is a place where all official problems, actions, and requirements can be voiced, displayed, and acted upon, and where decisions can be made to guide actions in the future.

Usually an EOC is organized into three main groups: Policy, Coordinations, and Operations. In smaller jurisdictions, Coordination and Operations are sometimes handled by the same people. A support staff is needed to track messages and events, run copiers, fax machines, and operate the telephones.

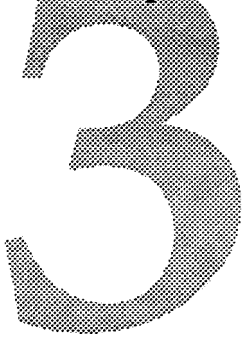
1. List reasons why it's important for government officials to meet in a central location in the event of an emergency.

2. Contact your local Emergency Manager to find out if your jurisdiction has an EOC. If so, determine: a) its organizational structure, and b) its location.

◆ *Restart the video and play to stop 3*

Exercise Requirements

Workstop 3: Describe Compliance with FEMA Requirements



FEMA Program Requirements

The Federal Emergency Management Agency administers state Emergency Management Assistance (EMA) programs, which allocate funds to jurisdictions participating in a well-planned and balanced 4-year exercise program. Non-EMA jurisdictions are also encouraged to participate in an exercise program.

EMA funded jurisdictions are expected to fulfill certain requirements. The emphasis of state and local exercise programs is on testing and evaluation of emergency functions as outlined in their Emergency Operations Plan (EOP).

- **Practice with emergency functions:** Within a 4-year cycle governments must exercise on a rotating basis all functions of their Emergency Operation Plan. Emergency functions are the activities or operations that need to be performed during disaster response and recovery.
- **Functional exercises:** In a 4-year period, three functional exercises should be held. Don't confuse functional exercises with emergency functions. All exercises test functions.
- **Full-scale exercise:** At least one exercise during the 4 year period must be a full scale exercise that tests nearly all of the emergency functions. It can be conducted any time during that period—at the beginning, middle or end.

Other exercise activities, such as tabletop exercises, normally serve as preparation for functional and full-scale exercises, though they do not receive credit.

- **Documentation:** Documentation of exercise participation must be provided. Since reporting systems change from time to time, check with state officers for present requirements for written reports.

Following the exercise, corrective action should be taken where any shortfalls exist in planning, training, personnel, equipment and facilities.

Independent Study Workbook

The program allows a great deal of flexibility over the four years. The main goal is to identify problems that can occur under the most chaotic of circumstances and take corrective actions.

There are many other types of federally sponsored programs that require exercises. For example, chemical stockpile (CSEPP,) Radiological Emergency Preparedness (REP,) and hazardous materials (HAZMAT). Answer these questions to assess the status of your agency

Questions

- Does your jurisdiction participate in an exercise program?
- Emergency Functions: Below are examples of emergency functions required by various government programs. Functions are actions or operations required in emergency response or recovery. Check any that your jurisdiction has tested in the last four years. (As far as you know.)

1. Alert Notification _____
Response/Recovery Personnel
2. Communications _____
Telephone, Radio, Amateur Radio
3. Coordination and control _____
EOC Operations, Incident Command, Mutual Aid
4. Emergency Public Information _____
Prior, During, and After Emergency; Public information generated from Joint Information Center and/or different sites
5. Damage Assessment _____
Private Sector, and Public Sector
6. Health and Medical _____
Emergency Medical Services, Environmental and Public Health, Mass Casualty, Medical Facilities, Radiological

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7. Individual/Family Assistance _____
*Effectiveness of Evacuation: Management, Facilities, Shelters,
Food/ Water/Clothing*
8. Public Safety _____
*Law Enforcement, Fire, Search and Rescue, Traffic Control During
Evacuation*
9. Public Works _____
Repairs, Construction and Support, Transportation
10. Resource Management _____
Personnel, Equipment, Emergency Action Steps
11. Warning _____
Systems Effectiveness (from EOC, Siren, Emergency Broadcast, Radio, TV).
12. Government Survival _____
*Succession of Leadership, Predelegation of Emergency Authorities, Emer-
gency Operations Centers and Alternatives, Safeguarding Records, Protec-
tion of Government Facilities and Personnel*

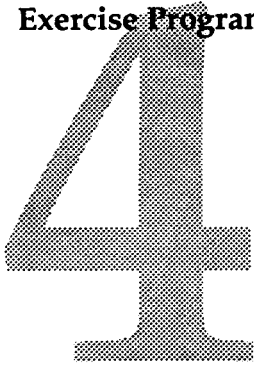
For additional lists of functions refer to the Civil Defense Preparedness Guides (CPG) 1-8 and 1-5 and the CSEP, REP and HAZMAT Exercise Methodology Manuals, to name just a few.

Check with your State Emergency Management Agency for other lists of functions or read your Emergency Operations Plan (EOP) to see what functions are listed there. Be aware that some mandated programs refer to functions as “objectives.” You will see the difference at Workstop #10.

▶ **Restart the video and play to Stop 4**

The Community Exercise Program

Workstop 4: Plan a Progressive Community Exercise Program



A progressive community exercise program is a commitment from various agencies to participate in increasingly challenging exercises over a period of time. It is:

- "Progressive," in that one exercise builds upon another,
- A "program," in that it is a carefully planned sequence that will meet specified goals,
- "Community," because it involves the participation of many community agencies/jurisdictions/organizations.

A "Progressive Community Exercise Program" needs to be comprehensive. That is, as a designer of an exercise program, you need to consider every type of responding agency in your community. Your community is composed of more than police, fire, and public works. Hospitals have requirements to exercise each year. So do airports and other regulated agencies or organizations. It is wise to consider everyone who is a part of your community in building a progressive community exercise program.

Pages 9 and 10 illustrate sample programs for a fictitious community. The programs are identical, except for the schedule. The first example extends the exercises over a year and a half; the second shows how the program could be completed in less time. The disasters upon which the program is based are flood and HAZMAT. The functions to be tested are: volunteer agencies, shelter, communications and evacuation.

On the blank sheet following the examples, organize a simple exercise program for your jurisdiction that could lead to a full-scale exercise. It should consist of various types of exercise activities. You probably don't have the background to do a thorough job of this, but take a stab at a general plan. This is just practice.

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Functions: Volunteer Agencies, Shelter, Communications, and Evacuation.

Example 1: Hazards: Flood and HAZMAT.

An Exercise Program Schedule for Central City			
Exercise Activity	Purpose/Function	Participants	Schedule
Orientation	Communications	Emergency Management Staff	1st Month
Tabletop	Problems faced in flood, evacuation and sheltering	Emergency Management Staff, Mental Health, Shelter, Managers, RACES, Hams, etc.	4th Month
Orientation	Increased church group involvement and awareness	Emergency Management Staff, clergy, Laymen.	7th Month
Drill	Communications	RACES, Hams, etc.	9th Month
Tabletop	Media roles in promoting/controlling voluntary participation.	Emergency Management Staff, Mental Health, Media, Clergy.	11th Month
Functional	Problems in evacuation manpower allocation.	Emergency Management Staff, Fire, Police.	14th Month
Full-Scale	Evacuation, shelter, and relocation in a spring river flood.	Emergency Management Staff, Fire, Police, Clergy, Mental Health, Shelter, Managers, RACES, Hams, etc.	18th Month

Independent Study Workbook

Functions: Volunteer Agencies, Shelter, Communications, and Evacuation.

Example 2:

Hazards: Flood and HAZMAT.

An Exercise Program Schedule for Central City			
Exercise Activity	Purpose/Function	Participants	Schedule
Orientation	Communications	Emergency Management Staff	1st Month
Tabletop	Problems faced in flood, evacuation and sheltering	Emergency Management Staff, Mental Health, Shelter, Managers, RACES, Hams, etc.	3rd Month
Orientation	Increased church group involvement and awareness	Emergency Management Staff, clergy, Laymen.	4th Month
Drill	Communications	RACES, Hams, etc.	4th Month
Tabletop	Media roles in promoting/controlling voluntary participation.	Emergency Management Staff, Mental Health, Media, Clergy.	5th Month
Functional	Problems in evacuation manpower allocation.	Emergency Management Staff, Fire, Police.	6th Month
Full-Scale	Evacuation, shelter, and relocation in a spring river flood.	Emergency Management Staff, Fire, Police, Clergy, Mental Health, Shelter, Managers, RACES, Hams, etc.	8th Month

Independent Study Workbook

Activity

In the space below organize a simple exercise program that could lead to a full-scale exercise. Try to use all five exercise activities and involve appropriate agencies. In the blanks at the top indicate two or three main functions that the program will test, as well as the hazard or hazards on which it will be based. If you need more space, use a separate piece of paper.

Functions: _____
Hazards: _____

An Exercise Program Schedule			
for _____			
Exercise Activity	Purpose/Function	Participants	Schedule

▶ *Restart the video and play to stop 5*

Independent Study Workbook

Exercise Development: The Big Picture

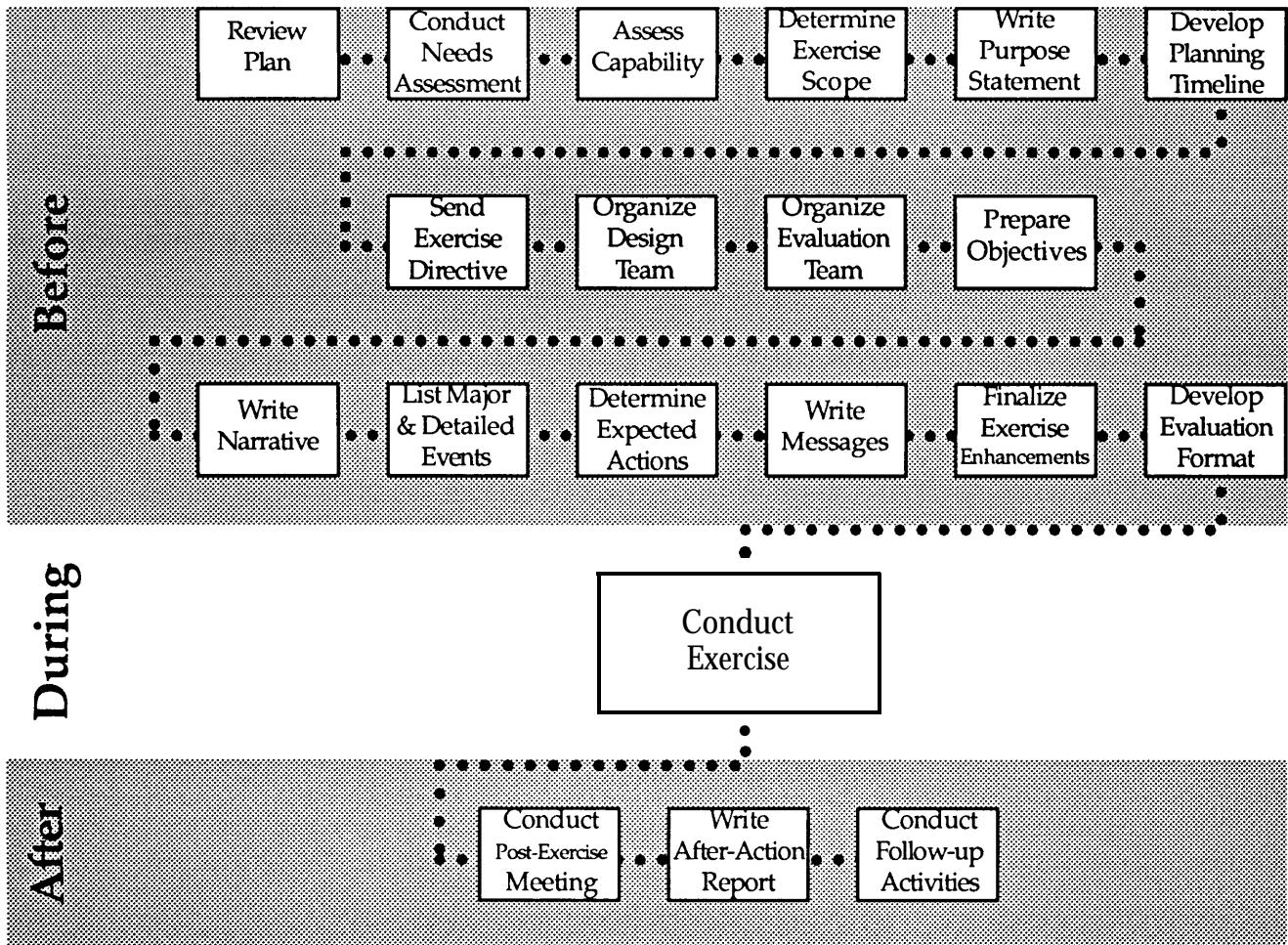
Workstop 5: Answer Questions About Exercise Development

5

A great exercise doesn't just happen. Planning begins long before the day of the exercise and continues afterward. The following diagram illustrates a possible sequence of tasks occurring before the exercise, during the exercise, and after the exercise.

Notice that it differs somewhat from the road signs in the video in that it is more complete. The eight design steps (which are introduced at Workstop 7) are shown in the approximate order that they would be done. Also, some of the evaluation tasks are worked into the timeline.

Sequence of Tasks for a Successful Exercise



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Questions to Consider:

Following are some questions about development tasks. Fill in brief responses. There are no right or wrong answers.

- Are you familiar with your jurisdiction's emergency plans, policies and procedures? (yes/no)
- How far in advance would your jurisdiction realistically have to schedule to effectively plan and design a:

TABLETOP?

FUNCTIONAL?

FULL-SCALE?

- What costs might be incurred for these exercises in your jurisdiction? (Don't list exact dollar figures—just types of expenses, such as materials, communication devices, wages or salaries, transportation, etc.)

TABLETOP?

FUNCTIONAL?

FULL-SCALE?

- Can different organizations/agencies/jurisdictions in your community combine their exercises to reduce costs and still fulfill program requirements? Who?

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- Underline any roles you have assumed in exercises.

Tabletop Exercise: Facilitator, participant.

Functional Exercise: Player, simulator, controller, evaluator.

Full-Scale: Responder, controller, evaluator, victim.

- Have you taken part in a post-exercise debrief? (yes/no)
 - What characteristics do you think an evaluator should have?

 - Have you helped write an evaluation report? (yes/no)
-

The Design Team: Because there are so many tasks that need to be accomplished in the planning, implementation, and evaluation of an exercise, a “Design Team” needs to be created. A Design Team is made up of representatives from the various agencies, jurisdictions, and organizations in your community who would be involved in response and recovery efforts.

An Exercise Design Team could include a representative from a number of agencies such as: Police, Fire, Emergency Medical Services (EMS,) Paramedics, Hospitals, Airports, Business and Industry, the LEPC (a local hazardous materials preparedness committee), Red Cross, RACES (Radio Amateur Civil Emergency Services) and other volunteer organizations, the County Emergency Manager, or the City Emergency Manager.

These representatives working together can accomplish goals that would be difficult or impossible within a single organization or jurisdiction. The team could be limited enough to design a small exercise for a single organization or large enough to design a state or national exercise.

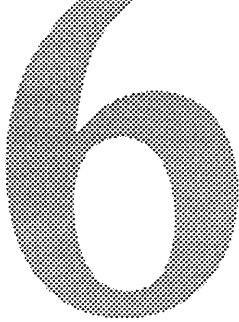
Activity:

Name members who might serve on a Design Team for your jurisdiction, office, or agency:

Restart the video and play to stop 6

The Functional Exercise

Workstop 6: Identify Participant Roles in a Functional Exercise



A functional exercise simulates a disaster in the most realistic manner possible, short of moving real people and equipment to a real site. It achieves this realism by means of a carefully designed and scripted scenario, in which field play is simulated. For example, instead of actually dispatching a responder to the scene of the disaster, this is simulated.

It's important not to confuse "functional exercises" with emergency "functions." All exercises (tabletop, functional, and full-scale) test and evaluate functions or operations contained in the Emergency Operations Plan (EOP). In every disaster there are functions that must be performed in order to respond to and recover from the effects of the disaster. Emergency operation plans outline the functions that need to be organized and the agency designated to perform them.

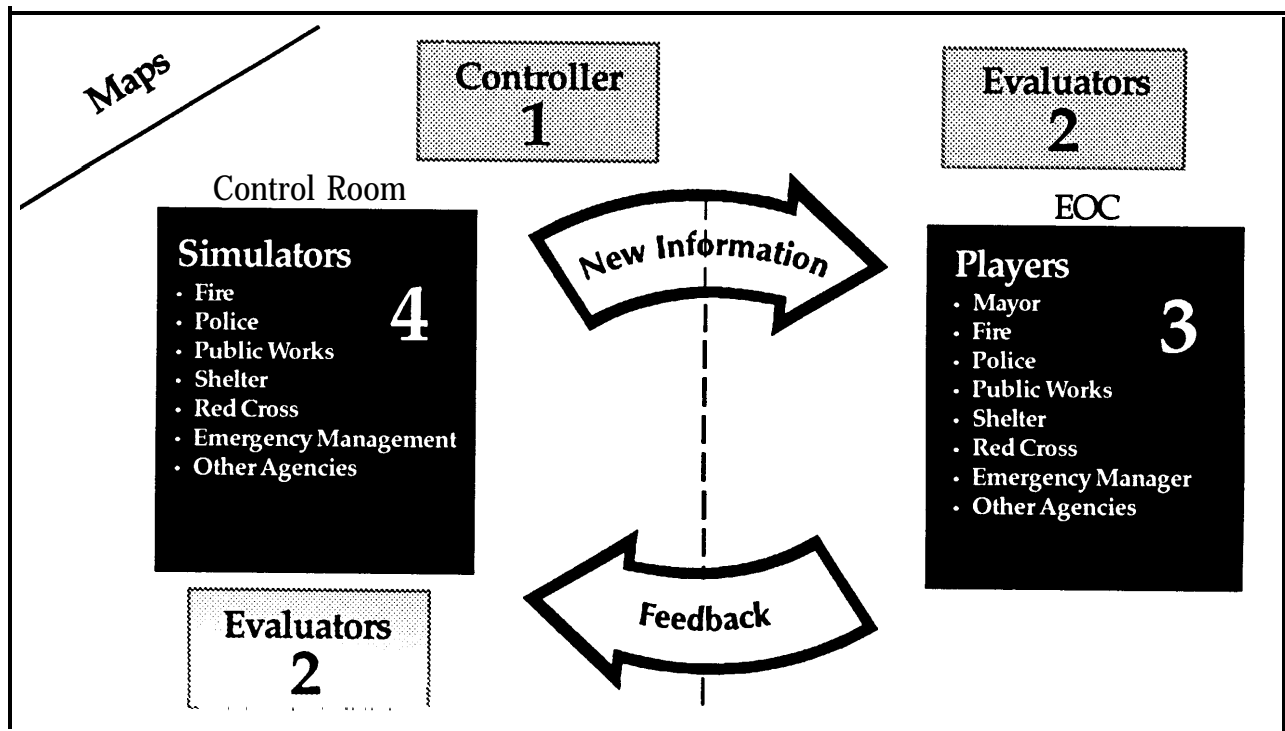
In order to simulate these functions in the most realistic manner, a functional exercise requires that some participants act as controller, simulators, and evaluators. Usually members of the design team fill these crucial roles, with the team leader often serving as controller and some of the members acting as simulators and evaluators. The facility is setup so that each of the participants has space allocated to them.

Because much of the success of the exercise depends on how well key participants know their roles and how facilities are set up, you will want to review them. On the opposite page is a sketch of a functional exercise set-up with participant roles shown. Study the sketch. Then match the definitions of participant roles with the appropriate responsibilities.

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Definitions:

- a. Representatives from agencies or organizations who would actually be called upon in the event of an emergency—such as medical and health, fire, police, public works, red cross, mayor’s office. Gathered in the EOC, they respond as realistically as possible to messages describing the events taking place.
- b. Persons designated to observe action and later report what went well and what did not go well. They see if goals and objectives are met and note how participants perform.
- c. Person(s) who make(s) certain that the exercise is conducted according to the objectives, and proceeds according to plan. Adds or discards messages to increase or slow down the pace of the exercise. Maintains order and professionalism in the control and simulation rooms.
- d. Persons who assume the roles of “outside” people or agencies and transmit pre-scripted or spontaneous messages to players. Their purpose is to create an artificial reality by communicating events that might actually happen in a given emergency.



◆ Restart the video and play to Stop 7

WHAT'S AHEAD:

Workstops 7 through 13 walk through the process of exercise design. Exercise design steps focus on the activities and skills needed to design an exercise:

Design Steps:

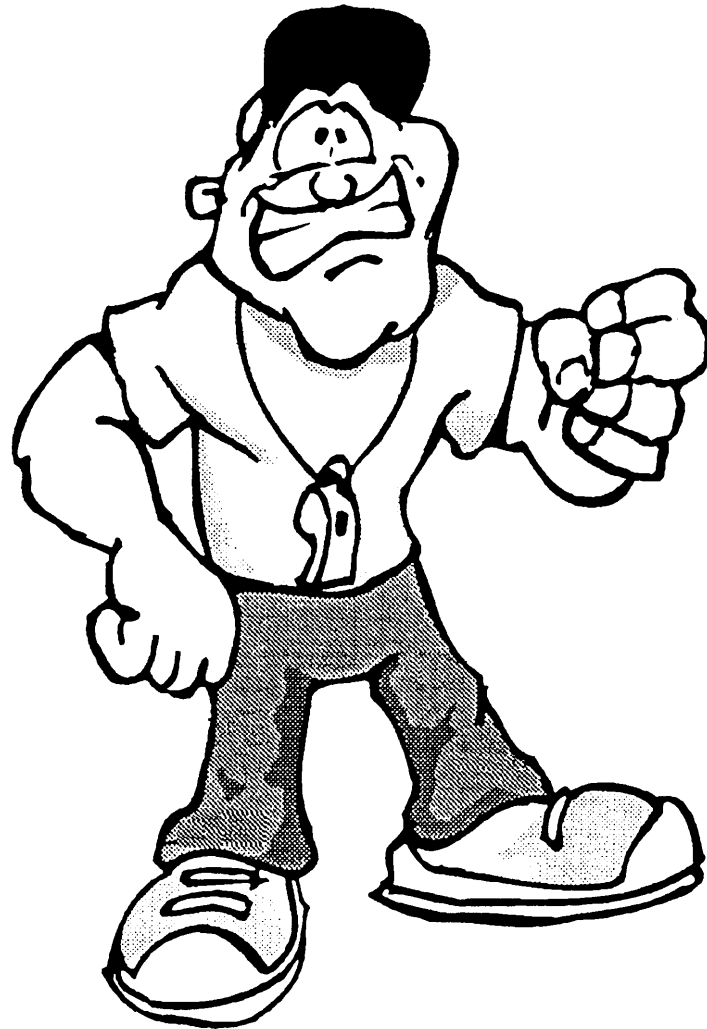
- 1-Assess Needs
- 2-Define Scope
- 3-Purpose Statement
- 4-Write Objectives
- 5-Compose Narrative
- 6-Major & Detailed Events
- 7-Expected Actions
- 8-Prepare Messages

You will be shown examples based on two different kinds of disasters:

- Video: A hazardous materials spill.
- Workbook: Airplane crash.

To take you through the 8 steps, may we introduce...

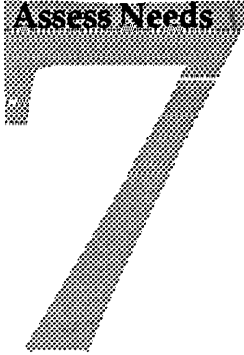
The Design Coach



The coach graphically represents the steps involved in designing some kinds of exercises. Many people find Exercise Design Coach helpful as a learning and memory aid.

The Exercise Design Process: Step 1-Assess Needs

Workstop 7: Assess Needs



The first step in developing any exercise is to assess the needs of your emergency management program. Indicate below the most pressing problem areas in your community. Your jurisdiction's emergency plans and procedures is a good place to start. Also consider what you have learned from previous exercises or emergencies.

1. Hazards: List the various hazards in your community. What risks are you most likely to face?
Examples: Flood, HAZMAT, Terrorism, Mass Fatality, Winter storm.
2. Area: What geographical areas are most vulnerable to the high priority hazards? (Refer to the hazards listed above.)
3. Functions: What emergency management functions are most in need of rehearsal? (Where have difficulties occurred in the past?)

Alert and Notification
Communications
Coordination and Control
Emergency Public Information
Damage Assessment
Health and Medical
Other

Individual and Family Assistance
Public Safety
Public Works
Resource Management
Warning

**Assessment is
the backbone
of exercise design**



4. Agencies and Personnel: What agencies and personnel need to participate in an exercise? For example, have any agencies updated their plans and procedures, changed policies or staff? Who is part of your exercise “community?” What manpower can you reasonably expect to have devoted to developing an exercise?

List the Agencies:

- | | |
|--|--|
| <input type="checkbox"/> Police | <input type="checkbox"/> Hospital |
| <input type="checkbox"/> Fire | <input type="checkbox"/> EMS |
| <input type="checkbox"/> Sheriff | <input type="checkbox"/> Business and Industry |
| <input type="checkbox"/> Public Works | <input type="checkbox"/> School District |
| <input type="checkbox"/> Airport | <input type="checkbox"/> Surrounding Jurisdictions |
| <input type="checkbox"/> State Emergency Management Agency | <input type="checkbox"/> Volunteer Organizations |
| <input type="checkbox"/> Red Cross | |
| <input type="checkbox"/> Others | |

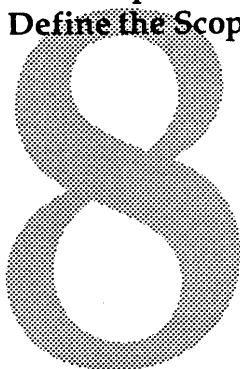
5. Exercises: What exercise activities would be most helpful? What experience have personnel had with the various types of exercises? How much preparation time can you reasonably expect to allocate to developing an exercise? What physical facilities would you need when you conduct an emergency operation?

- Orientation
- Drill
- Tabletop
- Functional
- Full-Scale

◆ *Restart the video and play to Stop 8*

The Exercises Design Process: Step 2-Define the Scope

Workstop 8: Define the Scope



Defining the scope of an exercise means putting realistic limits to it. You can't practice all operations in the context of all hazards using all agencies in an area that includes all possibilities. To define the scope of an exercise, refer to the assessment sheet you completed at Workstop 7, and draw some meaningful limits. Consider those that are (a) highest priority and (b) can be realistically addressed in one exercise.

Then in the space below, write the decisions you have made.

1. **Hazard:** Select one hazard. (The basis for selection might be that it's the highest priority it hasn't been exercised recently, or it would help you exercise the functions that need testing, as determined from your assessment at Workstop 7.)

2. **Geographical area:** In what location will the simulation take place? (Give specific address or location.) Make sure it coincides with the hazard.

Exercise scope means
planning no more than
you can get your arms around.



3. Functions: List the most important functions, procedures or operations that you want participants to practice. (Three to five functions are sufficient.)

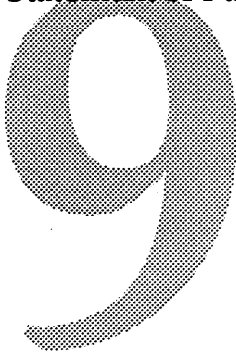
4. Agencies and Personnel: List agencies and personnel who would benefit most by the exercise. Don't include more than the exercise can handle, but make sure it is comprehensive and that the participants will match the tested functions.

5. Exercise Type: What exercise will be most useful at this point? (Consider the exercise experience that personnel have had in the past, and the level of stress and complexity that would be useful.)

◆ *Restart the video and play to Stop 9*

The Exercise Design Process: Step 3-Write a Statement of Purpose

Workstop 9 : Write a Statement of Purpose



Once you have determined the scope of your exercise, the statement of purpose is a snap! Simply incorporate into a single sentence the five components identified in the scope. The purpose statement gives focus to all aspects of the exercise. Also, because it is succinct and clear, it is useful in communicating plans to media and community leaders. A purpose statement is a broad statement of the goal of the exercise.

Below is one format that might be used to write a statement of purpose. The airplane crash scenario will be the basis for the rest of the examples in the workbook.

The purpose of the proposed emergency management exercise is to test and evaluate the following emergency functions:

- a. Evacuation/sheltering
- b. Mutual Aid
- c. Resource Management
- d. Emergency Public Information

by involving the following agencies and personnel:

- a. Airport Authority
- b. Police (Sheriff, City and State)
- c. Fire Department (County and neighboring jurisdictions)
- d. Red Cross
- e. Health and Medical

in a functional exercise simulating an airplane crash at the Whispering Meadows Subdivision.

Activity

Take your decisions from Workstop 8 (Scope) and fill in the blanks:

The purpose of the proposed emergency management exercise is to test and evaluate the following emergency functions:

a.

b.

(Functions to be exercised)

c.

d.

by involving the following agencies and personnel:

a.

b.

(Agencies and Personnel involved)

c.

d.

in a(n) _____ exercise simulating a(n) _____
(type of exercise) (hazard)

at _____
(place/address)

The statement of purpose is a concise way to introduce a plan to others



◆ **Restart the video and play to Stop 10**

The Exercise Design Process: Step 3-Write a Statement of Purpose

Workstop 10: Write Objectives

10

Objectives take the purpose statement one step further—by breaking down general purposes into specific objectives. Objectives state exactly what you want an exercise to accomplish. They spell out who, will do what, according to what standard. Because they help keep everything on track—from messages to evaluations to follow-up—they need to be carefully phrased. They should be:

- Simple (so you don't try to cover too broad an area)
- Clear (so people can understand them)
- Specific (rather than general or vague)
- Measurable (so you can tell if you reached the objective)

The purpose of the proposed emergency management exercise is to test and evaluate the following emergency functions:

- Evacuation/sheltering
- Mutual Aid
- Resource Management
- Emergency Public Information

by involving the following agencies and personnel:

- Airport Authority
- Police (Sheriff, _____ and State)
- Fire Department (County and neighboring jurisdictions)
- Red Cross
- Health and Medical

in a functional _____ exercise simulating an airplane crash
the Whispering Meadows Subdivision.

With such a purpose statement, one might write objectives similar to this:

Participants will demonstrate the ability to open, staff, and monitor the high school as a shelter according to the county Emergency Operations Plan.

This objective ties into the function of evacuation and sheltering. While it does not specifically name the “participant,” it should be evident that the Red Cross, school district, and county Emergency Management Agency (EMA) will be the critical participants.

Independent Study Workbook

Examples

There are a number of ways to phrase objectives. The examples below illustrate different approaches.

Good objectives

- Responders will establish an incident command post immediately after the initial call.
- Emergency management staff will demonstrate the ability to initiate and complete a call-back of EOC personnel as stated in the emergency plan.

Poor Objectives

- To get the agencies to improve their disaster operations.
- To identify the primary reason for slow response of ambulance units.
- Emergency services personnel will sit down in the same room together and talk.

Independent Study Workbook

Your Objectives: In the space below, write three objectives that support the purpose statement you composed at Workstop 9.

1.

2.

3.

Objectives should normally be limited to no more than the number of fingers. They help you keep a finger on the focus of the exercise.



↘ *Restart the video and play to Stop 11*

The Exercise Design Process: Step 5-Compose a Narrative

Workstop 11: Compose a Narrative

The narrative is a brief scenario that sets the stage for an exercise. It provides the background information for the emergency, and helps participants approach the exercise as a real situation.

Example:

A Boeing 747, en route from Panama to San Francisco is experiencing in-flight engine problems and will have to make an emergency landing. Plans have been made to land at a large airport 200 miles north. However, the latest communication with the pilot indicates that the plane has lost engine power and is losing altitude too quickly to reach the large airport. Even though your city airport is too small to handle a 747, you are the only hope for the 450 passengers and 10 crew members.

Conditions at your airport are clear, and the surrounding area is dry. A hot, dry wind is blowing from the north.

The main runway lies along a relatively unpopulated suburban area. However, the likelihood of the pilot's being able to control the huge plane and stay within the landing space is slim. The approach passes over populated suburban housing developments.

Airport control tower alerts its own Crash/Fire Rescue units and requests that the local emergency services provide backup assistance in fire, police, medical, welfare, and search and rescue capabilities.

The narrative provides the first part of the legs on which the exercise will stand.



Your Narrative

The narrative sets the stage and puts the players at the beginning of the exercise. In the space below, compose a short narrative to set the stage for the disaster you have selected.

Consider answers to the following questions:

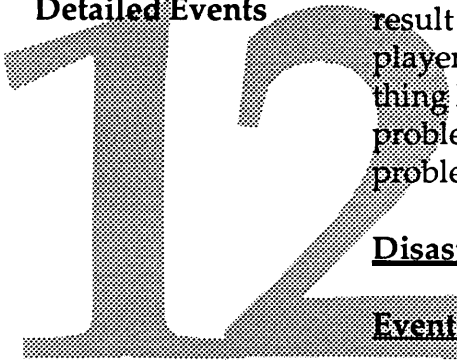
- What event?
- How did you find out?
- Was there advance warning?
- What time?
- What is the sequence of events?
- Where does it take place?
- How fast, strong, deep, dangerous?
- What response has been made?
- What damage is reported?
- What is predicted for the future?
- What are relevant weather conditions?
- What other factors would influence emergency procedures?

Write your narrative here:

◆ *Restart the video and play to Stop 11*

The Exercise Design Process: Step 6 - Write Major and Detailed Events

Workstop 12: Write Major and Detailed Events



result of the disaster. They motivate the actions that you want from Events are realistic problems, either large or small, that occur as a result of the disaster. They motivate the actions that you want from players during the course of the exercise. Major events are something like chapter headings in a novel. Detailed events are smaller problems associated with or resulting from major events. Events are problems, not actions of the responders.

Disaster: Airplane crash

Events:

Major Event:

1. Fuselage breaks apart and hits buildings below.

Major Event:

2. Fires break out in subdivision.

Detailed Events:

- On impact, airplane engine and fuel ignite 15 homes over two block area.
- Explosions from broken natural gas lines rock the neighborhood.
- Fires jump to other homes.
- Thick smoke blankets the area downwind.

Major Event:

3. Crowd gathers around crash site.

Detailed Events:

- Bystanders try to rescue the injured.
- Bystanders steal items from the crash site.

Major Event:

4. About 60 survivors are thought to be trapped in front section of jet.

Detailed Events:

- Rescuers hear screams and calls for help.
- Many of the trapped victims are severely injured.
- Bystanders pull passengers out of wreckage.

Independent Study Workbook

Your Events: In the space below list 2 or 3 events that might occur in your disaster scenario. Break down each of the major events into two or three detailed events, as shown in the example.

Disaster:

Major Events:

Detailed Events:

1.

1.
2.
3.

2.

1.
2.
3.

3.

1.
2.
3.

Major and detailed events provide stability to the exercise.



▶ Restart the video and play to Stop 13

The Exercise Design Process: Step 7-List Expected Actions

Workstop 13: List

Expected Actions

The whole point of an exercise is to get the participants to think and act in certain ways. Obviously, before this can happen, you have to decide what actions they should take. The actions, of course, are spelled out as procedures or policies in the jurisdiction's emergency plan or the agency SOP (Standard Operating Procedures). The actions you select will depend upon the exercise objectives and the plan being tested.

Each event should be designed to prompt one or more expected actions from one or more agencies that will be participating in the exercise.

Example:

Detailed Event

On impact, airplane engine and fuel ignite 15 homes over a two-block area.

Expected Actions

- Fire units in neighboring jurisdictions called in.
- Police units in neighboring jurisdictions put on alert.
- Utility services informed that utility functions are affected.
- Residents of nearby houses evacuated.

Detailed Event

Explosions from broken natural gas lines rock the neighborhood.

Expected Actions

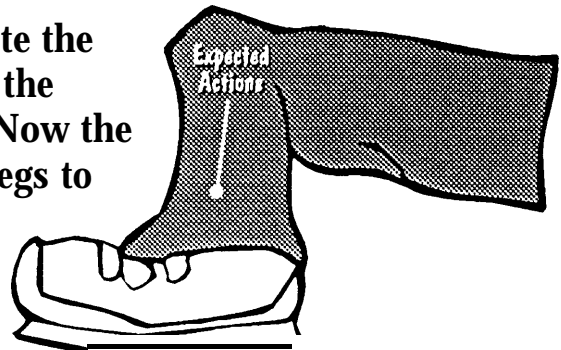
- Utility company called in.
- Mutual Aid called for.
- Evacuation (protective action) is called for.

Your list of expected actions:

In the space below, list three events from Workstop 12. Then for each event write some actions that you would expect from agencies involved in your exercise. (At least one expected action for each event.)

<u>Detailed Event</u>	<u>Expected Actions</u>
1.	1. 2. 3.
2.	1. 2. 3.
3.	1. 2. 3.

Expected actions complete the narrative leg by showing the results of the narrative. Now the exercise has two strong legs to run on.



▶ **Restart the video and play to Stop 14**

The Exercise Design Process: Step 8-Prepare Messages

Workstop 14: Prepare Messages

14

Examples

A message is a description of a problem or occurrence which is sent to an agency representative in the EOC. It serves one purpose: to cause a player to carry out one of the expected actions. In order for this to happen, the message must come from a believable source and go to the right person. The components of a message are sender, receiver, method of transmission, and the content of the message itself.

Event

Expected Actions

On impact, airplane and fuel ignite several homes in area.

Fire units in neighboring jurisdictions called in.

To: Dispatch

Method:
Radio

We are trying to control numerous fires in the Whisper Meadows housing area. It's more than we can handle. Need assistance as quick as possible.

Event

Expected Action

Bystanders steal things from the crash site.

Securing of crash site by Law Enforcement

To: Emergency Operations Center

Method:
Telephone

From: Incident Commander

Look, I've got my hands full fighting these fires. But people are showing up and taking things. Get someone out here to help secure the area.

Your Message

In the space below write the event and expected action that you listed at the last Workstop. Then compose a message that will achieve the desired action.

Event

Expected Action

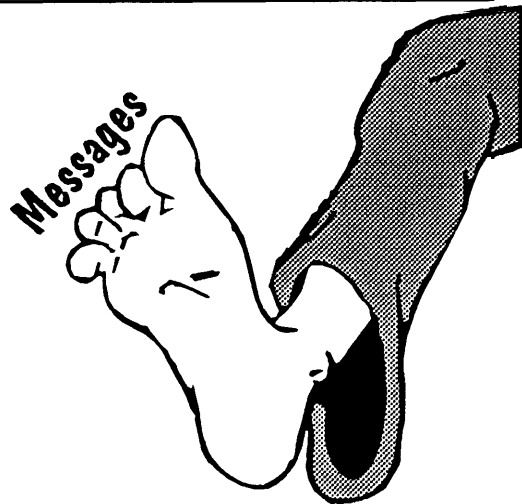
1.

To:	Method:	From:
Message:		

2.

To:	Method:	From:
Message:		

As Toes provide balance to the human body, so do messages balance an exercise. Messages keep all players involved and, more important, spread activity.



◆ Restart video and play to Stop 15

Independent Study Workbook

Introduction to the Exercise Design Course

Workstop 15: Familiarize Yourself with the Exercise Design Course

This Independent Study Course is a pre-requisite for the Exercise Design Course. Following is a summary of what you can expect from the Exercise Design course:

Time Frame

The Exercise Design Course takes two days. Some instructors expand it further by incorporating all or part of the Exercise Evaluation Course.

Many of the topics are expansions or applications of topics in the Independent Study Course. Some are new.

Topics

- Developing a Community Exercise Program
- The Exercise Development Process
- Tabletop exercise experience
- The Functional Exercise
- The Full-scale exercise
- Evaluation
- Exercise Enhancements
- Functional Exercise Development and Experience

Teaching methods

The course is managed by one or more instructors who serve more as facilitators than lecturers. Information and skills are taught mainly through class discussion, group activity videos and behavior modeling sessions.

Participants will be given a student manual to use for future reference.

Expectations

The Exercise Design Course is largely experience and practice. Therefore, your role will be active rather than passive. To gain the most you will need to participate actively, express your learning needs, learn from others, and take risks.

Because some of the activities will be based on the work you have done in the Independent Study Course, remember to bring this workbook with your ideas, notes, and questions. You'll be much better prepared if you review the video and workbook before you come.

A Few Final Words...

Congratulations!

...on completing this Independent Study Course. We'd like to acknowledge the time and effort you've taken to learn about exercise design. We hope it has been an enjoyable and useful experience. We encourage you to continue learning about disaster exercises and the contribution an exercise program can make to your community's disaster preparedness.

A Community Exercise Program has many benefits. Among the most important is the team building that takes place as emergency response agencies and organizations work together to test policies, plans, and procedures. Exercises are the most effective means by which a community can assess its emergency capabilities and protect life and property.

The Videocassette and Workbook...

...are yours to keep. You may want to pass the video along to someone else who shares your interest in community disaster exercises. You'll want to enroll in the Exercise Design Course. When you do so, bring the workbook along with you. Be prepared to share your ideas with other class members.

The Test...

...on the next page will serve as a review of the Independent Study Course. It will also help you evaluate what you have learned. We encourage you to complete the final test. Feel free to use the video and the Student Workbook to assist you in completing it.

Mail the answer sheet to:

Orientation to Community Disaster Exercises
Independent Study Program
Emergency Management Institute
16825 S. Seton Avenue
Emmitsburg, MD 21727

Those Who Pass the Test...

... will receive a certificate of completion from the Emergency Management Institute. You can take pride in the work you have done.

HOW TO TAKE THE FINAL EXAMINATION

We have included an answer sheet as part of the student manual or you may use the separate answer sheet insert provided as part of the Independent Study package.

Please use a soft lead (#2) pencil to complete the answer sheet. Do **NOT** mark more than one choice because this will automatically be scored as an incorrect response.

The test consists of 25 multiple choice questions and should take no more than 45 minutes to complete. Complete all of the questions. You may refer to the student manual and the video to help answer the questions.

When you have answered all the questions, prepare the answer sheet and drop it in the mail. Your answers will be scored and the results returned to you as quickly as possible. If you score at least 75 percent, you will receive a certificate of completion from FEMA. If you score less than 75 percent, you will have another chance to take the test.

FINAL EXAMINATION: AN ORIENTATION TO COMMUNITY DISASTER EXERCISES

1. Exercise Design is accomplished best by:
 - a. An Individual
 - b. A team of representatives from various agencies
 - c. An elected official and his/her staff
 - d. Members of a single organization
 - e. None of the above.

2. Which of the following characteristics most accurately describe a full-scale exercise:
 - a. Low-stress discussion of problems, with emphasis on providing general information.
 - b. Mobilization of people and equipment in the field to practice specific functions. EOC is activated.
 - c. A stressful, realistic simulation which takes place in building rather than in the field.
 - d. Policy and coordination staff gather around a table to discuss responses to actual emergency situations.
 - e. None of the above.

3. Which best describes an Emergency Operations Center (EOC)?
 - a. A central location from which emergency operations are coordinated.
 - b. A center where disaster victims can rest and obtain food.
 - c. A command post at the scene of the emergency where responders can be debriefed about the incident.
 - d. An information center, where the Public Information Officers provide updates to the media.
 - e. None of the above.

4. Which community has the best approach to a progressive community exercise program and also meets Federal Emergency Management Agency expectations?
 - a. City A: Within a 3-year period it conducts 1 functional exercise and 2 tabletop exercises. Officials are worried about an earthquake, so they concentrate on this disaster alone.
 - b. City B: Within a 4-year period the community holds twelve exercises. Because they have a small budget and want to emphasize all emergency functions within that budget, they plan mainly orientation or tabletop exercises.
 - c. City C: This community has identified improvements which are needed with communications and coordination. They concentrate a 4-year effort on these two functions. In that period they hold 1 tabletop, 1 functional, and 1 full-scale exercise.
 - d. City D: Officials plan a cycle of exercises that will test nearly all emergency functions. Within a 4-year period they conduct and evaluate several tabletop exercises, 3 functional exercises, and 1 full-scale exercise.
 - e. None of the above.

5. When should an exercise design team address the exercise evaluation process?
 - a. From the beginning—concurrent with the design of the exercise.
 - b. After the exercise is designed.
 - c. During the time the exercise is being held.
 - d. After the exercise is over.
 - e. Just before the exercise officially starts.

6. Which of these individuals is a simulator in a functional exercise?
 - a. John notices that the exercise is proceeding too slowly and that some of the agency representatives are just sitting around doing nothing. He adds two or three messages to speed things up.
 - b. Henry observes the exercise. He notes that the police department did not set up road blocks as they were supposed to.
 - c. Susan, the Red Cross director for the community, takes her chair and designated position in the EOC.
 - d. Jane, a member of the exercise design team, plays the part of a medical team. In accordance with the exercise scenario, Jane calls the Red Cross director in the EOC to say the temporary hospital at the incident site needs more blood supplies.
 - e. None of the above.

7. An exercise design team should consist of the following individuals except:
 - a. Fire Service personnel
 - b. Police
 - c. Exercise Players
 - d. Emergency Program Manager
 - e. Red Cross

8. Select the objective which best exemplifies the requirements for a good objective from the following:
 - a. Emergency management staff will demonstrate the ability to initiate and complete a call-back of EOC personnel in 30 minutes.
 - b. Emergency management staff might be able to improve their call-back system.
 - c. Volunteers could be used in the response.
 - d. To find out if the fire/rescue department will effectively perform all duties during any major emergency or disaster.
 - e. None of the above.

9. The purpose of an exercise narrative is to:
 - a. Summarize the responsibilities of the exercise participants and provide a brief orientation.
 - b. Enable the exercise team to focus on a few objectives, rather than creating a scenario that is too broad.
 - c. Set the stage for the exercise, so that the disaster will be more realistic and understandable to the participants.
 - d. Outline the sequence of events that will take place as the exercise progresses.
 - e. None of the above.

10. Components of a "message" in a functional exercise are usually the following:
 - a. Functions, agencies, hazard, geographical area.
 - b. Sender, receiver, message, method of transmission.
 - c. Major event, detailed events, expected actions.
 - d. Date, inside address, heading, complimentary close.
 - e. A stamped self-addressed postcard.

11. What is the primary purpose of a "message" in a functional exercise?
 - a. To serve as a means of communication from controller to simulators.
 - b. To provide information to the media on the progress of the exercise.
 - c. To cause a player to carry out one or more expected actions.
 - d. To provide a means for players to inform the controller when they are experiencing problems.
 - e. A "message" has no purpose in a functional exercise.

12. Which of the following are examples of costs associated with an exercise?
 - a. Staff time
 - b. Fuel for equipment
 - c. Costs for exercise enhancements
 - d. Materials/supplies needed to conduct the exercise.
 - e. All of the above

13. Which of the following is an advantage of a progressive community exercise program?
 - a. It encourages team building as emergency response agencies and organizations work together to test policies, plans, and procedures.
 - b. It enables mayors and other elected/appointed officials to plan and design a full-scale exercise.
 - c. It allows a community to conduct a fullscale exercise immediately without the conduct of tedious, simpler exercises, like tabletops and functional.
 - d. It totally eliminates the need for planning and cooperation.
 - e. None of the above.

14. What degree of competence can you realistically expect to gain from successful completion of this Independent Study Course?
- You should be able to design a complete community exercise program all by yourself and you will not need any help from an Exercise Design Team.
 - You are ready to design a full-scale exercise.
 - You are totally prepared to design and conduct a tiny functional exercise.
 - You have learned about the different types of exercises which are part of progressive community exercise program and are ready to learn more about exercise design.
 - You are ready to teach people how to design exercises.
15. An evaluation methodology consists of:
- Evaluation strategy, organization and deployment of the evaluation team, evaluation checklists and forms.
 - The method of finding evaluators.
 - The organization of department heads into a committee to decide how objectives will be met.
 - The 5 final evaluation reports.
 - None of the above.
16. What is the primary purpose of emergency exercises?
- To fulfill government requirements in order to receive funding.
 - To improve the image of middle managers in key departments.
 - To teach people how to design an exercise.
 - To enable a community to test and evaluate its emergency preparedness and response capabilities before an actual emergency in order to save lives, conserve property, and preserve the environment.
 - None of the above.
17. Which type of exercise is described below?
- A group of community and agency officials meet in a large room. To begin the exercise, someone reads a few paragraphs describing a hurricane that has just hit the area. Then a facilitator hands messages (problem statements) to some of the participants, who describe how they would solve various problems caused by the hurricane. The emphasis is on a relaxed but thorough discussion.
- Orientation
 - Tabletop
 - Functional
 - Full-scale
 - None of the above.

18. Which type of exercise is described below?

Community and agency officials meet in the EOC. Situated in a separate area are individuals who enact the roles of people at the scene of the disaster. Using telephones or radios, these people call into the EOC with messages describing problems caused by the disaster. In the same area is a controller who manages the exercise. Though the disaster is simulated, the exercise is very realistic because it takes place in real time and is very stressful.

- a. Orientation
- b. Tabletop
- c. Functional
- d. Full-scale
- e. Drill

19. In what way are completing a needs assessment, defining scope, and writing a purpose statement alike?

- a. These steps are most effective if done by the emergency program manager rather than the design team.
- b. They are not important to the design process.
- c. They address the same areas identified in the assessment process, which are gradually limited and brought into focus .
- d. They are the final steps in exercise evaluation.
- e. All of the above.

20. Which of the following are emergency functions?

- a. Communications, Health and Medical, Public Works.
- b. Degree of realism, Degree of stress, Communication Devices.
- c. Policy and Decision Making, Coordination, Operations.
- d. Simulator, Controller, Evaluator.
- e. Exercise participants or Players.

21. In a functional exercise, what is the responsibility of the controller?

- a. To design the exercise.
- b. To evaluate the exercise.
- c. To conduct the exercise according to the objectives.
- d. To take part in the exercise as a player in the EOC.
- e. All of the above.

22. Who are the "players" in a functional exercise?
- Those who assume roles of "outside" people or agencies.
 - Heads of agencies and government who would actually assemble in the EOC in case of emergency.
 - Those who take part in initial planning stages.
 - Those who evaluate the exercise.
 - None of the above.
23. Which is the best definition of a "progressive community exercise program"?
- A series of exercises arranged in random order.
 - An exercise plan for the Fire and Police Departments.
 - A carefully planned full-scale exercise, in which all community agencies take part.
 - The participation of all community agencies with emergency responsibilities in a series of increasingly more challenging exercises over a period of time.
 - A series of exercises over a period of time which begins with a major fullscale exercise which tests nearly all emergency functions in the community and culminates in a small tabletop exercise.
24. Which would be a logical first step in the development of an exercise?
- Review the community's Emergency Operations Plan.
 - Schedule the facilities and invite people.
 - Design the exercise.
 - Assemble props and other enhancements.
 - Evaluate the exercise.
25. In the design of a functional exercise, what is a "major event"?
- The disaster on which the exercise is based-such as a flood, hurricane, or earthquake.
 - A high profile exercise that would attract a lot of attention from people driving by the field site.
 - A large problem that would realistically occur as a result of the disaster such as "bridge washes out".
 - The initial meeting of the design team.
 - All of the above.