Unit 6: The Functional Exercise
Introduction

This unit focuses on the functional exercise. We will look closely at the characteristics of the functional exercise—how it differs from the tabletop, who participates, how it works, and key design considerations. This unit is pivotal, because later in the course you will develop a functional exercise based on what you have learned here.

Unit 6 Objectives

After completing this unit, you should be able to:

- Describe the purpose and characteristics of a functional exercise.
- Explain how designing a functional exercise differs from designing a tabletop exercise.
- Describe the physical requirements and participant roles in a functional exercise.
What Is a Functional Exercise?

The functional exercise simulates an emergency in the most realistic manner possible, short of moving real people and equipment to an actual site. As the name suggests, its goal is to test or evaluate the capability of one or more functions in the context of an emergency event.

It is important not to confuse “functional exercises” with emergency “functions.” All exercises (tabletop, functional, and full-scale) test and evaluate functions contained in the Emergency Operations Plan (EOP). In this course, “functions” refers to actions or operations required in emergency response or recovery. The thirteen functions recognized by FEMA were introduced earlier, in Unit 1, are:

- Alert Notification (Emergency Response).
- Warning (Public).
- Communications.
- Coordination and Control.
- Emergency Public Information.
- Damage Assessment.
- Health and Medical Assistance.
- Individual/Family Assistance.
- Public Safety.
- Public Works/Engineering.
- Transportation.
- Resource Management.
- Continuity of Government.

The key characteristics of functional exercises were discussed in Unit 2. You may wish to refer back to that discussion now. Below is a brief summary of the main points.

### Key Characteristics

- Interactive exercise, designed to challenge the entire emergency management system. Can test the same functions and responses as in a full-scale exercise without high costs or safety risks. Usually takes place in an EOC or other operating center.
- Involves controller(s), players, simulators, and evaluators.
- The atmosphere is stressful and tense because of real-time action and the realism of the problems.
- Exercise is lengthy and complex; requires careful scripting, careful planning, and attention to detail.
- Geared for policy, coordination, and operations personnel (the players).
- Players practice their response to an emergency by responding in a realistic way to carefully planned and sequenced messages given to them by simulators.
- Messages reflect a series of ongoing events and problems.
- All decisions and actions by players occur in real time and generate real responses and consequences from other players. Guiding principle: Imitate reality.
What Is a Functional Exercise? (Continued)

Best Uses

The functional exercise makes it possible to test the same functions and responses as would be tested in a full-scale exercise, without the high costs or safety risks. The functional exercise is well-suited to assess the:

- Direction and control of emergency management.
- Adequacy of plans, policies, procedures, and roles of individual or multiple functions.
- Individual and system performance.
- Decision-making process.
- Communication and information sharing among organizations.
- Allocation of resources and personnel.
- Overall adequacy of resources to meet the emergency situation.
**Activity: Compare Tabletop and Functional Exercises**

*In the following table, compare tabletop and functional exercises by writing a brief description in each of the cells.*

<table>
<thead>
<tr>
<th></th>
<th>Tabletop</th>
<th>Functional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of Realism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Format/Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atmosphere</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who Takes Part</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who Leads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where Held</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Deployed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Adequacy of Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Decision-Making Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Complexity/Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal Evaluation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Activity: Compare Tabletop and Functional Exercises ( Continued )

**Suggested Answers:**

<table>
<thead>
<tr>
<th></th>
<th>Tabletop</th>
<th>Functional</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree of Realism</strong></td>
<td>Lacks realism</td>
<td>As realistic as possible without deploying resources</td>
</tr>
<tr>
<td><strong>Format/Structure</strong></td>
<td>Group discussion, based on narrative and problem statements/messages</td>
<td>Interactive; simulators deliver “problem” messages, players respond in real time</td>
</tr>
<tr>
<td><strong>Atmosphere</strong></td>
<td>Low-key, relaxed</td>
<td>Tense, stressful</td>
</tr>
<tr>
<td><strong>Who Takes Part</strong></td>
<td>Facilitator, participants (decision-making level); may use recorders</td>
<td>Controller, players (policy, coordination, and operations personnel), simulators, evaluators</td>
</tr>
<tr>
<td><strong>Who Leads</strong></td>
<td>Facilitator</td>
<td>Controller</td>
</tr>
<tr>
<td><strong>Where Held</strong></td>
<td>EOC, other operations center, or conference room</td>
<td>EOC or other operations center</td>
</tr>
<tr>
<td><strong>Equipment Deployed</strong></td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Test Coordination</strong></td>
<td>Yes, on a discussion level</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test Adequacy of Resources</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test Decision-Making Process</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Relative Complexity/Cost</strong></td>
<td>Small group; simple format; modest cost</td>
<td>Large scale; complex format; moderate cost to design and implement (higher than tabletop, lower than full-scale)</td>
</tr>
<tr>
<td><strong>Formal Evaluation</strong></td>
<td>No (self-assessment by participants)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Participant Roles

As noted earlier, the functional exercise involves players, simulators, a controller, and evaluators. In a small jurisdiction or organization, one or two people may serve as controller, simulator, and evaluator. In larger jurisdictions, many more people will be necessary.

Let’s take a closer look at what is involved in each role and how participants are selected.

Players

The players in a functional exercise are people who hold key decision-making or coordinating positions and would normally function in the operations center.

By operations center, we mean the central location that is designated in a real emergency for policy decisions, coordination, control, and overall planning. For a governmental jurisdiction, it would be the EOC; for a volunteer agency or private sector entity, it would be the central location from which key decision makers operate in an emergency situation.

Decision makers. Key decision makers would normally include leaders in government and key responding organizations: The mayor or other chief executive, and chiefs and coordinators of emergency services such as Fire, Police, EMS, Public Information Officer (PIO), and so on. In a nongovernmental organization, the CEO and other organizational leaders would participate.

Coordination and operations. Serving in the coordination and operations groups are people from various departments who work with policy makers. In large exercises, a separate operations group carries out directives. In small exercises, the coordination and operations roles may be taken by the policy makers.

The best guide in selecting who should participate in an exercise is the emergency plan.

Duties. The only job of the players is to respond as they would in a real emergency to the messages that they receive during the exercise. All of the decisions and actions of the players take place in real time and generate real responses and consequences from other players.
Participant Roles (Continued)

**Simulators**

To create a real-life environment, simulators portray the organizations that would normally interact with the players in the operations center. They do this by delivering messages—descriptions of events or problems which require players to act.

Some messages are scripted in advance; others are spontaneous responses to player decisions. They are input into the exercise by means of radio or telephone, or by written notes simulating radio and telephone transmissions.

**Duties:** Simulators are responsible for all actions taken by organizations or individuals outside of the EOC. They:

- Send the players prescripted messages representing private citizens, agencies, or other organizations, according to scheduled times in the sequence of events.

- Simulate all actions taken by an agency or other organization.

- Ad lib spontaneous messages as needed. Examples of times when a simulator may need to respond spontaneously include:
  - When a member of the operations center issues a directive that results in events not anticipated in the scenario.
  - When a player asks for more information.
  - When a player decision is not logically linked to the next event in the scenario.

- Inform the controller of any deviations from the scenario, or special problems.

When simulators are given directives, they are required to follow through and implement the directives in a professional manner.
Participant Roles (Continued)

**Selection:** Simulators must be able to ad lib intelligently in the situations just described, so it is important that they be familiar with the organization(s) that they are simulating and with the sequence of events and messages. It is useful, therefore, to draw simulators from the organizations that they will portray, and/or from the design team.

**Numbers:** It is difficult to give a rule of thumb concerning specific numbers of simulators needed for an exercise. The number of simulators will vary according to the:

- Number of players.
- Length of the exercise.
- Knowledge and training of the simulators.
- Communication channels available.

For best results, try to have at least one simulator per organization represented in the operations center, with extras to play the part of citizens or other private organizations.

**Organizing:** It is a good idea to group simulators according to function, to simplify the exercise and reduce the number of simulators needed. One approach is to organize them into three groups:

- Government agencies not participating in the exercise.
- Participating organizations: Field units of organizations participating in the exercise (police, fire, public works, etc.) and private medical and support organizations.
- Other private facilities and individuals: Citizens and nongovernment organizations.

The following table illustrates how this approach could be used for a community.
Participant Roles (Continued)

<table>
<thead>
<tr>
<th>Nonparticipating Government Entities</th>
<th>Participating Organizations</th>
<th>Other Private Facilities/Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or two persons simulating:</td>
<td>One person per organization simulating:</td>
<td>One or two persons simulating:</td>
</tr>
<tr>
<td>▪ Federal regulators.</td>
<td>▪ City departments and agencies.</td>
<td>▪ Industries.</td>
</tr>
<tr>
<td>▪ State or state area EOC.</td>
<td>▪ County departments.</td>
<td>▪ Commercial business.</td>
</tr>
<tr>
<td>▪ County EOC.</td>
<td>▪ Medical/health services.</td>
<td>▪ Media.</td>
</tr>
<tr>
<td>▪ Other city EOC.</td>
<td>▪ Volunteer organizations.</td>
<td>▪ Private citizens.</td>
</tr>
<tr>
<td>▪ State/Federal officers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Care and shelter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Resources and support.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Controller

The controller supervises the simulation or overall conduct of the exercise, making certain that it proceeds as planned and that objectives are reached.

The controller must be able to view the exercise as a whole and to think quickly on his or her feet. Players often make unanticipated decisions, and the controller must be able to respond to these.

Duties: The main duties of the controller are to:

- Ensure that the simulators and evaluators are properly trained before the exercise.
- Orient the participants to the exercise and present the narrative.
- Monitor the sequence of events and supervise the input of messages, using the Master Scenario of Events List as a guide.
- Adjust the pace of the exercise when needed—inserting more messages when it drags and discarding messages when the pace is too frantic.
- Make decisions in the event of unanticipated actions or resource requirements.
- Maintain order and professionalism throughout the exercise.
Participant Roles (Continued)

Selection: Controllers can usually be drawn from the exercise design team. Because the team members are already familiar with the exercise, they are well suited to the task of keeping the exercise moving toward the anticipated conclusion.

Preparation: To properly prepare for the event, the controller should have the following items available:

- List of objectives.
- Master Scenario of Events List.
- Messages.
- List of players.
- List of resources available to the jurisdiction or organization.

It is usually helpful to hold a briefing before the exercise to orient the staff members. At the briefing, the controller should train the simulators, ensuring that they are familiar with the scenario, objectives, resources, and the messages they will be responsible for delivering. The evaluation team leader should provide similar training to the evaluators, including exercise objectives, evaluator duties, and schedule.

Evaluators

The evaluators observe the actions and decisions of the players to report later what went well and what did not. To do this, evaluators need to be familiar with the objectives, the exercise scenario, and the jurisdiction or organization that is undertaking the exercise.

Duties: Key duties of the evaluators include the following:

- Observing exercise progress and recording observations (usually on provided evaluation forms), taking care to remain unobtrusive in the process.
- Noting how well the exercise is fulfilling objectives and trying to identify problems if objectives are not met.
- Evaluating the actions of the players, not the players themselves. Documenting both positive and negative observations.
Participant Roles (Continued)

- Informing the controller during the exercise of any problems.
- Preparing brief written comments that can be included in the final evaluation and recommendation report that will be prepared by the emergency manager or other responsible party.

Unit 8 will provide more detailed information about the role of the evaluators.

How a Functional Exercise Works

A brief review of how a functional exercise works is given below. Keep in mind, however, that you will gain a better understanding of how a functional exercise works if you look for opportunities to observe one or—better yet—to participate in one.

The Beginning

When a functional exercise begins will depend on its objectives. If testing the notification function is one of the objectives, then a "no-notice" exercise is useful. In this case, participants are given only the approximate timeframe scheduled for the exercise—anywhere from one day to several weeks). The exact time when it begins will be a surprise, allowing the exercise evaluators to observe how effectively notification and assembly at the command point take place.

In exercises where notification is not an objective, the exercise time is usually announced in advance.
How a Functional Exercise Works (Continued)

**Briefing**

Exercise participants may arrive on the scene of a functional exercise with only a vague notion of what is to take place. The exercise is much more likely to be successful if the participants receive a briefing that covers the following:

- Overview of objectives
- How the exercise will be carried out
- Time period to be simulated
- Ground rules and procedures

**Keep the Briefing Short.** Avoid anything that distracts from the atmosphere of a real emergency. (For example, include a written announcement in the exercise materials to cover any administrative details such as restrooms and break times.)

**Narrative**

The exercise formally begins with the presentation of the narrative. It can be read aloud; presented on TV, computer, or slides; or dramatized.

**Message Delivery and Response**

The action begins as simulators and players interact with one another:

- Simulators communicate messages to players, and players respond as they would in a real emergency.
- Players make requests of simulators, and simulators react convincingly.

This ongoing exchange takes place according to the carefully sequenced scenario of events that governs what takes place, when each event occurs, and the messages used to inform the players.
Example: Message Delivery/Response

A message comes in from the incident site commander (a simulator) to the police chief (a player—a real police chief). The message informs the chief of a traffic accident blocking emergency evacuation routes. The chief confers with aides, quickly plans a new traffic route, and telephones the incident site commander (simulator) with the instructions. The simulator carries out the instructions and reports back.

Because the police chief might not react to the message as planned, simulators need to be prepared for a different response. They also must ensure that key events are kept active. For example, a player, not recognizing the importance of a key message, might delay action or fail to act. The simulator must then do something to cause the player to retrieve the event. If the situation reaches a point where the exercise cannot proceed until a decision has been made, the controller must force the issue.

Messages can arrive on paper, by telephone, by radio, or in person. Using telephones, when possible, increases the feeling of a real emergency, but whispered messages or written notes can also work well.

The success of the exercise depends on the extent to which the participants are able to carry out their functions as if they were in a real emergency. Exercise participants should be encouraged to think of each message as an actual event.

Encouraging Spontaneity

The players should be able to decide among the full range of responses normally available to them during an emergency. Their ability to make decisions, communicate, or otherwise carry out their responsibilities should not be constrained by the exercise situation.

To allow the participants spontaneity, exercise controllers, and simulators must be well trained and prepared to handle the unexpected. While this provides a better exercise for participants, it does place a burden on controllers and simulators who must be ready to “go with the flow” to some degree when the situation calls for it.
How a Functional Exercise Works (Continued)

**Controlling the Action**

While simulators and players are transmitting messages and responding to them, the controller carefully monitors the interaction and progress.

**Dealing with spontaneous decisions:** The controller should be made aware of significant spontaneous decisions and make adjustments in the scenario where necessary.

**Example**

If a fire chief anticipated a later message by sending fire trucks into an area, the controller might need to stop a simulator from inputting a later message asking for fire trucks.

**Adjusting the pace:** The controller can control the pace of the exercise by adjusting the message flow—slowing things down when the pace is too frantic or speeding it up when the exercise drags. The controller can also even out the pace among participants. Remember, one inactive organization can distract others and bring down the intensity of the exercise. Avoid boredom by ensuring a smooth flow of messages.

Some specific suggestions for adjusting the pace are given on the next page.
How a Functional Exercise Works (Continued)

<table>
<thead>
<tr>
<th>Strategies for Adjusting the Pace of Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Slow the pace</strong> by:</td>
</tr>
<tr>
<td>• Rescheduling events to allow more reaction time. Have the simulators wait before sending messages.</td>
</tr>
<tr>
<td>• Discarding messages that are relatively unimportant or do not greatly impact other decisions. Throw away messages that don’t contribute to the objectives.</td>
</tr>
<tr>
<td><strong>Increase the pace and fill gaps</strong> by:</td>
</tr>
<tr>
<td>• Speeding up the delivery pace (varying from the planned schedule).</td>
</tr>
<tr>
<td>• Determining what is causing gaps and being ready to add or alter messages spontaneously when needed. Look at organizations with gaps to see if they have been unintentionally ignored. If so, add messages. (It may be, however, that the organization simply has little to do during a particular period.)</td>
</tr>
<tr>
<td>• Keeping a supply of optional messages on hand that can be added when needed.</td>
</tr>
<tr>
<td>• Adding side events—routine actions a department would have to continue throughout an emergency. (For example, insert a routine traffic accident to put stress on police and fire departments. Report an unrelated heart attack to challenge medical personnel.)</td>
</tr>
<tr>
<td>• Adding secondary emergencies—events that develop out of the main flow of exercise events. (For example, insert utility outages, water main breaks, gas leaks, media calls, and similar events to keep players involved between their own major events.)</td>
</tr>
<tr>
<td>• Adding special planning requirements that would cause an inactive group to engage in a short-term preparedness activity. (For example, have hospitals test emergency generators.)</td>
</tr>
<tr>
<td>• Adding misdirected messages—messages given to the wrong agency. Such messages can be used to gauge the agency’s clarity of role definition and to test whether they forward the message properly.</td>
</tr>
<tr>
<td><strong>Relieve overloads</strong> on particular organizations by:</td>
</tr>
<tr>
<td>• Reassigning. Verify that all messages are assigned to the right organizations. Then reassign any messages that could be used by another organization.</td>
</tr>
<tr>
<td>• Thinning. Divide the overloaded messages into two piles: (1) Essential to the flow of the exercise and (2) Nice to have. Then get rid of some from the latter group.</td>
</tr>
</tbody>
</table>

**Maintain an even message flow** by maintaining a chart similar to the following.
How a Functional Exercise Works (Continued)

Sample Message Flow Chart

Check the times when messages are scheduled for delivery to each organization.

<table>
<thead>
<tr>
<th>Participating Agency/Organization</th>
<th>Fire</th>
<th>EMS</th>
<th>Public Works</th>
<th>EOC</th>
<th>Facility CEO</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:03</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:06</td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:09</td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:12</td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>10:15</td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Note: A blank planning chart is provided as Job Aid 16 in Appendix A.)

Skipping Time

Functional exercises can depict events and situations that would actually occur over an extended time period (one or two weeks or more). In order to include multiple phases of the emergency (preparation, response, recovery, mitigation) in a two-day exercise, it would be necessary to stop the exercise periodically and advance the time by a number of hours or days.

These skip-time transitions should be kept to the minimum necessary to cover the scope of the exercise. They can usually be planned to coincide with a natural break point.

Who handles the time skips? The controller is responsible for managing skip-time transitions and preparing transition updates to be presented to the participants before resuming the exercise.

Simulators are responsible for updating simulation displays to reflect the results of the previous events and participant actions. Actions that would have been undertaken during the transition period will be indicated as accomplished on the transition date.

The following table illustrates a skip-time schedule for a functional exercise.
How a Functional Exercise Works (Continued)

### Sample Skip-Time Schedule for a Two-Day Functional Exercise

<table>
<thead>
<tr>
<th>Actual Time</th>
<th>Period Simulated</th>
<th>Time/Activity Simulated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0900</td>
<td>Alert (mobilization)</td>
<td>First 3 hours (in real time) of Alert (mobilization)</td>
</tr>
<tr>
<td>1200</td>
<td>SKIP</td>
<td>Transition Statement</td>
</tr>
<tr>
<td>1300</td>
<td>Movement</td>
<td>First 3 hours (in real time) following evacuation order</td>
</tr>
<tr>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ACTUAL TIME LAPSE OF 15 HOURS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Day 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0800</td>
<td>Situation Update</td>
<td></td>
</tr>
<tr>
<td>1100</td>
<td>Movement</td>
<td>3 hours (in real time) of movement</td>
</tr>
<tr>
<td>1200</td>
<td>SKIP</td>
<td>Transition Statement</td>
</tr>
<tr>
<td>1530</td>
<td>Sustaining</td>
<td>2 hours (in real time) of early sustaining period</td>
</tr>
<tr>
<td></td>
<td>SKIP</td>
<td>Transition Statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1½ hours (in real time) of later sustaining period</td>
</tr>
</tbody>
</table>
Facilities and Materials

Location

Exercise where you operate. To the extent possible, the functional exercise should take place in the same facility and in the same operational configuration that would occur in a real emergency—usually the EOC or other operations center.

A frequent objection to exercising at the operations center is that there are not enough phones, or chairs, or restrooms. If that is the case, it is wise to find out in an exercise, not an emergency. If you can’t practice there, don’t expect to be able to conduct an emergency response there.

Room Arrangement

Various room arrangements can work for a functional exercise, depending on the size of the exercise. These are the basic requirements:

- Space for players—usually a table with plenty of work space
- Area(s) set aside for simulators
- Room for evaluators to observe
- A place from which the controller can operate

Small exercises: In very small exercises, a single room can work. The diagram below shows a simple layout for a small functional exercise.

Sample Arrangement for a Small Functional Exercise
Facilities and Materials (Continued)

**Complex exercises:** The following layout would be appropriate for an elaborate functional exercise. Two rooms are shown: The simulation room and the operations center, where the players are located.

**Sample Arrangement for a Complex Functional Exercise**
Facilities and Materials (Continued)

**Simulation room:** If more than one or two organizations or functions are being exercised, a simulation room is highly recommended. This room should comfortably house all of the simulators so that they can send, receive, and track messages and other communications with the players. It should be equipped with telephones or radios if they are to be used in the exercise. If message traffic is to be sent by hand, the situation room must be near the players.

Any layout should be adapted to the particular exercise and your local physical facilities. Whatever the layout, participant work spaces should be predesignated and working supplies made available. (In the previous diagram, notice the work space assignments of the simulators and players.)

**What About Communications Equipment?**

Communications equipment is useful when full simulation is the goal. However, often it is wise to use both electronic equipment and written messages. When working in compressed time, it is easy for problems to arise concerning:

- Development of telephone banks for the simulators.
- Telephone overload for the players.
- Equipment breakdown.

For these reasons, some managers leave extensive use of communications equipment for a drill. In any case, the use of electronic communication should be carefully—and perhaps selectively—planned.

**Equipment installation:** When telephones will be the primary means of communication during an exercise, it may be possible to use existing phones. Or, it may be necessary to install special lines and extensions to provide the necessary communication links. In some facilities, where a central switching system is used, an operator may handle all calls.
Facilities and Materials (Continued)

Suggestions for Successful Communication Links

- Prepare a special exercise directory of telephone numbers.
- Include communications procedures in the directory.
- If you don’t have telephones, use a variety of other formats, such as:
  - Written messages.
  - Simulated calls (sender whispers message in receiver’s ear).
  - Hand signals (player who wants to call a simulator raises a hand to bring the simulator over).
  - Simulated speaker phone or radio (simulator speaks loudly to the players).
- If you use written messages, provide standardized message forms.

Displays and Materials

Displays and materials—maps, charts, message forms, lists, etc.—are important in a functional exercise. (In the room arrangement diagram for a complex exercise, notice the variety of maps available to the players.) These materials are used to provide details for the scenario and keep track of activities.

Generally speaking, it’s best to use what you use every day. An exercise is no time to get new maps and message forms. Test the ones that you are currently using.

Unit 9 will provide more detailed guidance about exercise enhancements, including communications equipment, displays and materials, and other matters.

On page 6.24 is a checklist of facilities and materials suggested for a functional exercise. Depending on the scope and complexity of the exercise, specific items may or may not apply.
Designing a Functional Exercise

Design Process

The full eight-step design process outlined in Unit 4 is used to develop a functional exercise. While a simplified version of that process can be used to develop a tabletop exercise, a functional exercise—even a small one—requires careful attention to every step.

Exercise Materials

The success of a functional exercise rests on a carefully scripted scenario package that includes:

- A convincing narrative.
- Major and minor events that grow out of the narrative and are carefully chosen to support the objectives.
- Arrangement of the events in a realistic and convincing sequence from the beginning to the end of the exercise.
- Expected actions that are tied closely to the objectives.
- A great number of specific messages (perhaps 100 or more in a larger exercise) that are so well conceived that players will respond with the expected actions.

Expect the Unexpected

No matter how good you are at writing convincing messages, sometimes players will respond in unexpected ways. Although you should try to limit the unexpected as much as possible, occasionally a spontaneous reaction is better than the response prescribed in the emergency plan.

- A master scenario of events list that includes all of the messages/events, delivery times, and expected actions.

When you have completed the scenario package, you will use the developed materials to create materials for the exercise participants, including the Exercise Plan, Control Plan, Evaluation Plan, and Player Handbook.
Designing a Functional Exercise (Continued)

**Job Aids and Samples**

Job Aids 7, 8, 9, 10, 11, 12, 13, and 14 are provided in Appendix A. They are the job aids introduced in Unit 4. They are well suited to the design of functional exercises. In addition, a Functional Exercise Checklist is provided on the following pages. This checklist (which also appears as Job Aid 17 in Appendix A) summarizes the special considerations for designing a functional exercise.

In Unit 10, you will have an opportunity to develop a functional exercise using similar instruments.
Designing a Functional Exercise (Continued)

### Functional Exercise Design Checklist: Special Considerations

#### Facilities and Equipment
- Sufficient work space for simulators and players
- Simulation room (if needed) near player room
- Message center
- Control center
- Observer space
- Clear work surfaces
- Communication equipment (telephones, switchboard)
- Parking
- Adequate ventilation and lighting

#### Displays and Materials
- Displays easily visible or accessible
- Maps (regional, state, local, area, downtown, operational units)
- Major events log
- Bulletin board
- Status boards
- Simulation plotting board
- Easels, chart paper
- Message forms
- Pencils/Paper
- Name cards

#### Beginning:
- “No-notice” or scheduled (according to objectives)

#### Briefing (short):
- Objectives
- Process
- Time period portrayed
- Ground rules and procedures

#### Narrative:
- Verbal, print, TV, computer, slides, or dramatization
- Time-skips if needed

#### Messages:
- Large number (depends on scope)
- Prescripted
- Optional prescripted for adjusting flow

#### Message Delivery:
- Written
- Phone
- Other (verbal, speaker phone/radio, hand signals)
- Simulators prepared for spontaneous message development
- Standardized forms for written messages

#### Strategies for Adjusting Pace:
- Rescheduling
- Adding/Deleting messages
- Misdirecting messages
- Reassigning messages
**Activity: Identify Functional Exercise Responsibilities**

For each of the following activities, indicate who has primary responsibility by placing a check mark in the appropriate column.

<table>
<thead>
<tr>
<th></th>
<th>Controller</th>
<th>Simulator</th>
<th>Player</th>
<th>Evaluator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present the briefing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Observe and record exercise progress.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Control the pace.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Decide how to implement emergency plan procedures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Track progress.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ad lib in response to unplanned player actions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Decide how to handle unexpected situations in the exercise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Respond to events.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Ensure that simulators and evaluators are trained.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Coordinate with other organizations on joint responses.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Deliver messages.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Present the narrative.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Inform the controller of deviations from the scenario.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Act the part of organizations participating in the exercise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Act the part of organizations not participating in the exercise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Ensure that activities run smoothly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Supervise message input.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Portray private citizens and facilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Make decisions about departing from the planned event sequence.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Compare exercise conduct to objectives.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Update the situation board during skip-time transitions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Activity: Identify Functional Exercise Responsibilities (Continued)

### Suggested Answers:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Controller</th>
<th>Simulator</th>
<th>Player</th>
<th>Evaluator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present the briefing.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2. Observe and record exercise progress.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3. Control the pace.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4. Decide how to implement emergency plan procedures.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5. Track progress.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>6. Ad lib in response to unplanned player actions.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>7. Decide how to handle unexpected situations in the exercise.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8. Respond to events.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>9. Ensure that simulators and evaluators are trained.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>10. Coordinate with other organizations on joint responses.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>11. Deliver messages.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>12. Present the narrative.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>13. Inform the controller of deviations from the scenario.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>14. Act the part of organizations participating in the exercise.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>15. Act the part of organizations not participating in the exercise.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>16. Ensure that activities run smoothly.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>17. Supervise message input.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>18. Portray private citizens and facilities.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>19. Make decisions about departing from the planned event sequence.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>20. Compare exercise conduct to objectives.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>21. Update the situation board during skip-time transitions.</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Summary and Transition

Unit 6 was the second of three units providing in-depth information about specific types of exercises. This unit provided information about the functional exercise, including key characteristics, participants, format, strategies for conducting the exercise, and key design considerations. Unit 7 will discuss the full-scale exercise.

For More Information

Many of the information resources cited in Units 1–4 also contain information about functional exercises.
Knowledge Check

Carefully read each question and all of the possible answers before selecting the most appropriate response for each test item. Circle the letter corresponding to the answer that you have chosen.

1. The functional exercise:
   a. Simulates an emergency response in an actual field setting.
   b. Simulates an emergency situation in a relaxed group discussion.
   c. Simulates an emergency as realistically as possible without deploying people and equipment to the site.
   d. Simulates an emergency involving all of the functions, organizations, and personnel that would respond to an actual emergency.

2. The goal of a functional exercise is to test or evaluate the capability of one or more functions in the context of an emergency event.
   a. True
   b. False

3. An exercise that tested only notification procedures in response to a terrorist bombing would be:
   a. A drill.
   b. A tabletop exercise.
   c. A functional exercise.
   d. A full-scale exercise.

4. A functional exercise can test the same functions and responses as in a full-scale exercise without high costs or safety risks.
   a. True
   b. False

5. A functional exercise is similar to a tabletop exercise except that the functional exercise requires less scripting, planning, and attention to detail.
   a. True
   b. False

6. In a functional exercise, events are presented via problem statements or messages and then discussed by the group.
   a. True
   b. False
Knowledge Check (Continued)

7. A functional exercise is a good way to assess:
   a. Communication and information sharing among organizations.
   b. Response time of field personnel.
   c. Adequacy of response resources (personnel and equipment).
   d. Hazard analysis for developing the EOP.

8. __________ is the best location for a functional exercise.
   a. A field site similar to where an actual incident might occur
   b. The Mayor’s office
   c. A 911 dispatch center
   d. The Emergency Operations Center

9. Key decision makers in the jurisdiction or organization being exercised would normally assume the role of:
   a. Players.
   b. Simulators.
   c. Controllers.
   d. Evaluators.

10. Which of the following is NOT true of a simulator?
    a. He or she may deliver written messages.
    b. He or she is often called upon to rate the performance of key players.
    c. He or she may deliver messages verbally.
    d. He or she sometimes needs to make up a response to a player.

11. It may be necessary to delete planned messages if the pace of the exercise starts to drag.
    a. True
    b. False

12. When designing a functional exercise, the eight-step design process can usually be significantly shortened or simplified.
    a. True
    b. False
Knowledge Check (Continued)

1. c
2. a
3. a
4. a
5. b
6. b
7. a
8. d
9. a
10. b
11. b
12. b
Unit 7: The Full-Scale Exercise
Introduction

This unit focuses on the full-scale exercise. We will look closely at the characteristics of the full-scale exercise—how it differs from the other types of exercises, who participates, the role of the EOC, and key design considerations. At the end of the unit, you will develop an action plan for later use in designing a full-scale exercise for your organization.

Unit 7 Objectives

After completing this unit, you should be able to:

- Describe the purpose and characteristics of a full-scale exercise.
- Explain how designing a full-scale exercise differs from designing a functional exercise.
- Identify planning considerations for site selection and scene management for a full-scale exercise.
What Is a Full-Scale Exercise?

A full-scale exercise is as close to the real thing as possible. It is a lengthy exercise that takes place on location, using—as far as possible—the equipment and personnel that would be called upon in a real event.

In a sense, a full-scale exercise combines the interactivity of the functional exercise with a field element. It differs from a drill in that a drill focuses on a single operation and exercises only one organization.

Eventually, every emergency response organization must hold a full-scale exercise because it is necessary at some point to test capabilities in an environment as near to the real one as possible.

However, there is more to a full-scale exercise than just practice in the field. As we discussed in Unit 1, various regulatory agencies have requirements for full-scale exercises which must be satisfied. In order to receive FEMA credit, for example, a full-scale exercise must fulfill three requirements:

- It must exercise most functions.
- It must coordinate the efforts of several agencies.
- In order to achieve full coordination, the EOC must be activated.
Activity: Know Your Regulatory Requirements

Answer the following questions about your own organization. If you are not sure of the answer, this question may require some research. You are encouraged to find the answers now, before continuing with the unit. Understanding your organization’s requirements will provide an important foundation for the concepts covered in this unit.

1. What agencies or groups impose exercise requirements or guidelines on your organization?

2. What do they require concerning full-scale exercises? (Consider scope, frequency, numbers of organizations involved, coordination, communication, documentation, evaluation, or other issues.)
What Is a Full-Scale Exercise? (Continued)

**Key Characteristics**

The key characteristics of full-scale exercises were discussed in Unit 2. Below is a brief summary of the main points.

<table>
<thead>
<tr>
<th>Key Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive exercise, designed to challenge the entire emergency management system in a highly realistic and stressful environment.</td>
</tr>
<tr>
<td>Tests and evaluates most functions of the emergency management plan or operational plan.</td>
</tr>
<tr>
<td>Takes place in an EOC or other operating center and at field sites.</td>
</tr>
<tr>
<td>Achieves realism through:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• On-scene actions and decisions.</td>
</tr>
<tr>
<td>• Simulated “victims.”</td>
</tr>
<tr>
<td>• Search and rescue requirements.</td>
</tr>
<tr>
<td>• Communication devices.</td>
</tr>
<tr>
<td>• Equipment deployment.</td>
</tr>
<tr>
<td>• Actual resource and personnel allocation.</td>
</tr>
<tr>
<td>Involves controller(s), players, simulators (different from simulators in a functional exercise), and evaluators.</td>
</tr>
<tr>
<td>Players represent all levels of personnel, including response personnel.</td>
</tr>
<tr>
<td>Messages may be visual (e.g., staged scenes, made-up victims, props) and scripted.</td>
</tr>
<tr>
<td>All decisions and actions by players occur in real time and generate real responses and consequences from other players.</td>
</tr>
<tr>
<td>Requires significant investment of time, effort, and resources (1 to 1½ years to develop a complete exercise package). Attention to detail is crucial.</td>
</tr>
</tbody>
</table>
What Is a Full-Scale Exercise? (Continued)

The Purpose of Full-Scale Exercises

There are numerous reasons for conducting a full-scale exercise. A full-scale exercise:

- Enables a jurisdiction or emergency management system to evaluate its ability to perform many functions at once.
- Is useful to test total coordination, not only among policy and coordination officials, but among field forces. At the same time, it can test interorganizational coordination.
- Can pinpoint resource and personnel capabilities and reveal shortfalls.
- Greatly expands the scope and visibility of the exercise program.
- If well-planned, can attract public attention and raise credibility. (However, to be successful, it must be the culmination of a comprehensive and progressive exercise program that has been developed as the organizational capacity has grown.)

What Does It Take to Run a Full-Scale Exercise?

Some people wrongly believe that when a full-scale exercise is, started, it can run on its own steam. In fact, a full-scale exercise requires a substantial commitment of time, money, personnel, and expertise and should not be undertaken without the necessary preparation. These are the most important requirements:

- Substantial experience with preparatory exercises of various kinds—drills, tabletops, and functional exercises.
- Total commitment of all emergency service organizations.
- Support from the chief elected and/or appointed officials.
- Adequate physical facilities, including space for the EOC and field command posts.
- Adequate communication facilities (e.g., radios and telephones).
- Plans in place to handle costs (both evident and hidden), labor, time commitment, etc.
- Carefully thought out and planned site and logistics.
Activity: Compare Functional and Full-Scale Exercises

In the following table, compare functional and full-scale exercises by writing a brief description in each of the cells.

<table>
<thead>
<tr>
<th></th>
<th>Functional</th>
<th>Full-Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of Realism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Format/Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atmosphere</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who Takes Part</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who Leads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where Held</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Deployed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Adequacy of Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Decision-Making Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Complexity/Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal Evaluation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Activity: Compare Functional and Full-Scale Exercises (Continued)

**Suggested Answers:**

<table>
<thead>
<tr>
<th></th>
<th>Functional</th>
<th>Full-Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree of Realism</strong></td>
<td>As realistic as possible without deploying resources</td>
<td>As realistic as possible; resources deployed</td>
</tr>
<tr>
<td><strong>Format/Structure</strong></td>
<td>Interactive; simulators deliver “problem messages,” players respond in real time</td>
<td>Interactive; simulators play roles at the scene, players respond</td>
</tr>
<tr>
<td><strong>Atmosphere</strong></td>
<td>Tense, stressful</td>
<td>Highly tense, stressful</td>
</tr>
<tr>
<td><strong>Who Takes Part</strong></td>
<td>Controller players (policy, coordination, operations), simulators, evaluators</td>
<td>Controller(s), players (all levels), simulators, evaluators</td>
</tr>
<tr>
<td><strong>Who Leads</strong></td>
<td>Controller</td>
<td>Controller(s)</td>
</tr>
<tr>
<td><strong>Where Held</strong></td>
<td>EOC or other operations center</td>
<td>EOC and field site(s)</td>
</tr>
<tr>
<td><strong>Equipment Deployed</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test Coordination</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test Adequacy of Resources</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test Decision-Making Process</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Relative Complexity/Cost</strong></td>
<td>Large scale; complex format; moderate cost</td>
<td>Very large scale; highly complex; high cost</td>
</tr>
<tr>
<td><strong>Formal Evaluation</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Full-Scale Exercise Roles

Full-scale exercises involve one or more controllers, the participants, simulators, evaluators, and a safety officer.

Controllers

One or more controllers manage the exercise. In some exercises, where there are multiple sites or organizations, there may be more than one controller. In this case, all of the controllers cooperate under the direction of a chief controller.

The controller (or chief controller) is responsible for ensuring that the exercise starts on schedule. The controller also designates an exercise control point from which all communications should be monitored.

Participants

A full-scale exercise involves all levels of personnel, including:

- **Policy makers**—those who are responsible for making broad policy decisions. They might include the chief executive and his or her staff, the Public Information Officer, the emergency manager, key department heads, and other elected officials.

- **Coordination personnel**—people from various departments who coordinate decisions of policy makers and make plans for resources.

- **Operations personnel**—those who carry out the directives. Sometimes coordination and operations are the same.

- **Field personnel**—fire, police, EMS, search and rescue, volunteer groups, representatives of private enterprises who participate in the response, and many others.
Full-Scale Exercise Roles (Continued)

Simulators

Simulators in a full-scale exercise are different from those in a functional exercise. In a full-scale exercise, simulators are the volunteers who pretend to be victims of the emergency event. For realism, they may wear makeup and they “act” injured, unconscious, hysterical, or dead—whatever the scene calls for.

Evaluators

Evaluators observe the action and keep a log of all significant events. This is important because so many of the actions will not be prescripted, but rather spontaneous responses to other actions. Evaluators may videotape exercise action.

Safety Officer

There are so many potential safety issues in a full-scale exercise that a safety officer should be designated. This person’s primary responsibility is to analyze the entire exercise from a safety perspective. We will return to safety measures a little later.

How the Full-Scale Exercise Works

Beginning

The full-scale exercise begins in a fashion similar to the functional exercise; whether it is announced or “no notice” depends in part on the objectives. The exercise designer will decide how and when the exercise is to begin. The trigger may simply be a call from dispatch, a radio broadcast, or a telephone call from a private citizen. The beginning for each participant should be as realistic as possible (that is, personnel should receive notification through normal channels).

Personnel from the emergency services that are taking part in the field component must then proceed to the assigned location, where a “visual narrative” is displayed before them in the form of a mock emergency to which they will respond.

Key decision makers—those who would normally operate out of the EOC or command center during an emergency—proceed to the EOC to fulfill their roles. Command posts are set up as required by the event.
How the Full-Scale Exercise Works (Continued)

**Action**

Actions in a full-scale exercise occur in the EOC, at one or more field sites, and at the related command posts. Actions taking place at the event site and command posts serve as input to the simulation taking place at the EOC.

Although medical personnel, hospitals, EMS, fire services, and other localized emergency operations do not usually require centralized command from the EOC, they do require coordination with officials at the command posts.

**Sustaining Action**

Action is sustained by various means, including:

- Prescripted messages input by the controller(s).
- Messages and actions from the field that require action at the EOC.
- Spontaneous responses to the various messages and actions.

**Command Post Messages**

A field command post can be used as part of the message input into the EOC. Either the command post can be written into the scenario and have a set of prescripted messages to be transmitted by radio, or the command post controller can monitor the sequence of events and transmit spontaneous messages.
Exercise Locations

Field sites: The main event site will depend on the exercise scenario and objectives. For example, if the central event involves a plane crash, the exercise might take place at an airport. A simulated terrorist attack could be staged in a public facility such as a convention center or shopping mall. A hurricane or flood exercise might be dispersed over many locations.

Most events will involve additional locations such as secondary event sites, hospitals, mortuaries, shelters, and other support locations, and command posts will be established near the emergency sites. In fact, one of the reasons a full-scale exercise is so complicated is that activity is taking place in various locations, and all of the sites must be coordinated.

Emergency Operations Center: Activation of the EOC or other operations center is central to a full-scale exercise (just as it is in a functional exercise). The purpose of the EOC is to provide a policy and coordination facility for the Chief Executive Officer (CEO) and staff to respond effectively to an emergency.

In essence, the EOC is the voice of government during an emergency. Emergencies place strains on government—the demand for service escalates, while ability to deliver diminishes. Gathering information, making decisions, and directing necessary actions require close coordination between key officials. This coordination is best obtained if officials and support staff are in a centralized location with direct lines of communications.

The central location makes it possible to accomplish a number of tasks that would be impossible (or very difficult) separately. For example:

- Information can be gathered, verified, and recorded in one spot.
- Officials can deploy resources in a timely and intelligent manner.
- Direction and control can be efficiently managed.
- Officials can coordinate actions and decisions.
- It’s easier to set meaningful priorities when the key actors collaborate.

The size and makeup of the EOC differ according to the size of the jurisdiction or response system. The EOC may take up an entire floor of a building or a small room.
Designing the Full-Scale Exercise

The design of a full-scale exercise can be quite difficult, often requiring the expertise of several response organizations. When developing your first full-scale exercise, it is usually advisable to start small and build to more complex exercises. Many of the potential difficulties relate to logistical problems, but others rest with the design.

The entire eight-step design process is used to design full-scale exercises, although the process is applied somewhat differently when designing tabletops and functional exercises. The differences arise from the fact that tabletop and functional exercises rely on words to obtain realism, while a full-scale exercise—like a real emergency—gains its reality from things. There is a shift from a written scenario to visual reality represented by a real site, real people (some of them simulating victims), and real equipment.

Let’s take a closer look at how each of the design steps is applied to designing a full-scale exercise.

The First Four Steps

As with any exercise, the first four design steps are:

1. Assess needs.
2. Define the scope.
3. Write a statement of purpose.
4. Define objectives.

For a full-scale exercise, these steps require deeper analysis and greater attention to detail. So much rests on the outcomes of these steps that you must be sure that you have created a clear picture of what is to be achieved through the exercise. If any of these areas is left at all vague, the problems will be greatly magnified later on.
Designing the Full-Scale Exercise (Continued)

Step 5: The Narrative

The narrative is handled differently in a full-scale exercise. Because a lengthy verbal description is not needed to set the scene, the narrative is shorter.

Step 6: Major and Detailed Events

Major and detailed events still exist in a full-scale exercise, but many of them exist as actual occurrences rather than as verbal descriptions. For example, an earthquake scenario may have to rely on words to simulate some events. Other earthquake events can be simulated with fallen logs, bricks strewn around a building, dummies resting under beams, people acting injured or frightened, and other props.

Even when events are presented visually, they cannot be random and haphazard. Each event must be carefully planned and staged to support objectives and generate the expected actions.

Step 7: Expected Actions

As with any exercise, expected actions must be specifically identified, based on the exercise objectives. A detailed list of expected actions is an important foundation for the exercise evaluation.

Step 8: Messages

There are two kinds of messages in a full-scale exercise: Visual and prescribed. Much of the action grows out of the initial message and scene set-up. The scene that is set up contains a number of “visual” messages to which participants need to respond. It may also be necessary to have some prescribed messages to move the action along.

For every event, try to anticipate all possible reactions. But it is important to be flexible enough to adapt to player actions and decisions that you hadn’t expected. Sometimes an unanticipated response will be an improvement over the expected action.

If your scenes (events) are well planned, the exercise will go in the general direction that you planned, even if a few of the decisions are off course.
Designing the Full-Scale Exercise (Continued)

**Watch the Details!**

Make sure that the scenes that you create are good enough to get the expected action. For example, if you have victims who don’t know anything about medicine, either coach them in advance about their symptoms or tag them with symptoms and vital signs and apply makeup to simulate injuries. At the end of the exercise, you don’t want players to say, “Well, I didn’t know what you were getting at.”

**Special Considerations**

A full-scale exercise represents a huge logistical challenge, and it’s easy to overlook details. One way to promote clear and creative thinking is to “walk the site”—either physically or mentally. By doing so, you may be able to identify potential problems and do more realistic planning. In mentally evaluating the scene, you should consider:

- Site selection.
- Scene management.
- Personnel and resources.
- Response capability.
- Safety and legal liability.
- Emergency call-off.
- The media.

The following are some criteria and guidelines related to each of these areas.
Special Considerations (Continued)

Site Selection

Selecting the right site for the exercise should be one of the first decisions that you make. Because the exercise requires the mobilization of personnel and resources, space and realism are key.

<table>
<thead>
<tr>
<th>Site Selection Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credibility</strong></td>
</tr>
<tr>
<td>□ Is the type of emergency one that has a real possibility of occurring? (A credible emergency can elicit greater cooperation and participation.)</td>
</tr>
<tr>
<td><strong>Realism</strong></td>
</tr>
<tr>
<td>□ Is the site as realistic as possible without interfering with normal traffic or safety?</td>
</tr>
<tr>
<td>Examples: In simulating an overturned tanker truck on a main stretch of freeway, you can’t tie up rush hour traffic for hours. You’ll need to find a similar location to stage the crash. For a plane crash, try a secondary airport instead of a national airport.</td>
</tr>
<tr>
<td><strong>Adequacy of Space</strong></td>
</tr>
<tr>
<td>□ Is it large enough to accommodate the number of victims, responders, and observers?</td>
</tr>
<tr>
<td>□ Is there space for responders’ and observers’ vehicles?</td>
</tr>
</tbody>
</table>

Scene Management

Management of the scene refers to a number of issues, including:

- Logistics at the scene.
- Creation of a believable emergency scene.
- Number of victims.
- Management of props and materials.
- Number of controllers.

The checklist on the following page includes questions you should consider related to scene management.
## Special Considerations (Continued)

<table>
<thead>
<tr>
<th>Scene Management Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics</strong></td>
</tr>
<tr>
<td>4  Where will players be set up?</td>
</tr>
<tr>
<td>4  If there is a mobile EOC, where will they park?</td>
</tr>
<tr>
<td><strong>Believability</strong></td>
</tr>
<tr>
<td>4  How will you simulate the emergency? (E.g., if you will simulate fire, what will you use for smoke? How will you simulate a spilled chemical, broken glass, flood damage, etc.?)</td>
</tr>
<tr>
<td>4  Who will serve as victims? (For greater realism, select victims from different age groups, with different body types and physical characteristics.)</td>
</tr>
<tr>
<td>4  How will you ensure that victims realistically portray their roles?</td>
</tr>
<tr>
<td><strong>Number of Victims</strong></td>
</tr>
<tr>
<td>4  How many victims does the type of emergency call for?</td>
</tr>
<tr>
<td>4  What are the capability and capacity of hospitals and other resources to handle victims?</td>
</tr>
<tr>
<td>4  What does the history of past events indicate about types and numbers of injuries?</td>
</tr>
<tr>
<td><strong>Props and Materials</strong></td>
</tr>
<tr>
<td>4  What kinds of props and materials will be needed to simulate injuries, damage, and other emergency effects (e.g., victims’ makeup, dummies, construction materials)?</td>
</tr>
<tr>
<td><strong>Controllers</strong></td>
</tr>
<tr>
<td>4  How many controllers will be needed to manage the exercise sites? (In a multiple-site exercise, every site will require a controller.)</td>
</tr>
</tbody>
</table>
Special Considerations (Continued)

Personnel and Resources

The scenario will help determine how many people (participants and volunteers) will be involved, how many and what kinds of equipment will be needed, and the potential costs. Consider the following factors in planning for personnel and resources:

- How many participants? (Sometimes it is necessary to scale down the exercise to a half day or less to increase participation.)
- How many volunteers?
  - Scene set-up
  - Victims
  - Members of the public
- What kinds of equipment will be used?
- How many pieces of each type of equipment?
- How much fuel for vehicles and equipment?
- What kinds of materials and supplies will be needed, and how will they be obtained?
- Expenses:
  - Overtime wages
  - Vehicle and equipment fuel
  - Materials and supplies

Equipment

Keep your scenario reasonable in terms of equipment. True, you need to determine whether you have the resources to meet normal emergency demands. But don’t get carried away. Hold your people to the use of actual equipment. Don’t let them simulate use of equipment that doesn’t exist.
Special Considerations (Continued)

**Response Capability**

In planning both personnel and resources, take into consideration how the exercise might deplete the actual response capability of the organizations involved. It is unwise to compromise the ability to respond to real emergencies during an exercise. Here are some suggestions:

- Be sure that there are enough personnel and resources to continue their responsibilities if a real emergency occurs. (In some cases, a call-off procedure will solve part of the problem.)
- Consider using second-shift personnel or mutual aid from other jurisdictions or organizations.
- Consider using volunteers as a smaller response shift.

**Safety**

Total operation safety is an absolute must in a full-scale exercise. Awareness of safety issues must be carried throughout the planning and conduct of the exercise to ensure that safety problems are noted and eliminated. A safety officer should be designated whose primary responsibility is to analyze the entire exercise from a safety perspective. Suggested safety measures are on the next page.
Special Considerations (Continued)

<table>
<thead>
<tr>
<th>Suggested Safety Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include safety as one of the activities in exercise development.</td>
</tr>
<tr>
<td>Assign each exercise team member the responsibility of examining the exercise for safety within his or her discipline.</td>
</tr>
<tr>
<td>Identify all possible safety hazards and resolve each one.</td>
</tr>
<tr>
<td>Address safety as part of the preexercise briefing.</td>
</tr>
<tr>
<td>Include safety factors in simulator and evaluator information packets.</td>
</tr>
<tr>
<td>Examine each field location before the exercise to guarantee that safety precautions have been taken.</td>
</tr>
<tr>
<td>Ensure that the safety officer has the authority to terminate an activity or even the entire exercise if a safety problem arises.</td>
</tr>
<tr>
<td>Provide for call-off procedures in the event of an actual emergency.</td>
</tr>
</tbody>
</table>

**Emergency Call-Off**

A real emergency may occur during any exercise—especially a lengthy one. Be sure to keep enough personnel in reserve to handle routine problems.

In some instances, it may be necessary to stop the exercise to handle the real emergency. Every exercise should have a planned call-off procedure that will result in the prompt return of personnel and equipment to full duty status. The procedure should include a code word or phrase that the controller or safety officer can use to indicate that:

- The exercise has been terminated.
- Personnel should report to their regular duty positions.
- All radio traffic will return to normal.

The procedures should be tested.

**Legal Liability**

Legal questions of liability, including injuries during exercise conduct, must be researched by your local attorney.
Special Considerations (Continued)

**The Media**

A full-scale exercise of any magnitude will draw media attention whether you want it or not. If the exercise is well designed, favorable media reports are more likely. So, include the media in your plans. They can be very helpful in gaining support for the program, and their presence will increase realism.

Also make allowances for observers and public information people. Decide in advance where you will locate them, and give them an opportunity to observe.

**Job Aids and Samples**

The job aids introduced in Unit 4 (and provided in Appendix A) can be used to develop full-scale exercises. In addition, the checklist provided on the next page covers special considerations for full-scale exercises. (This checklist also appears as Job Aid 18 in Appendix A.)
### Full-Scale Exercise Planning Checklist: Special Considerations

**Participants:**
- Controller(s)—sufficient to manage all event sites
- Simulators (mock victims)—different age groups, body types, physical characteristics
- Players (most functions, all levels—policy, coordination, operation, field)
- Evaluators
- Safety Officer

**Site Selection:**
- Adequate space for number of victims, responders, and observers
- Space for vehicles and equipment
- As realistic as possible without interfering with normal traffic or safety
- Credible scenario and location

**Scene Management:**
- Logistics (who, what, where, how, when)
- Believable simulation of emergency
- Realistic victims
- Preparation of simulators to portray roles realistically
- Number of victims consistent with type of emergency, history of past events
- Types of injuries consistent with type of emergency, history of past events
- Victim load compatible with local capacity to handle
- Props and materials to simulate injuries, damage, other effects

**Personnel and Resources:**
- Number of participants
- Number of volunteers for scene setup, victims, etc.
- Types and numbers of equipment
- Communications equipment
- Fuel for vehicles and equipment
- Materials and supplies
- Expenses identified (wages, overtime, fuel, materials and supplies)

**Response Capability**
- Sufficient personnel kept in reserve to handle routine nonexercise events

**Safety**
- Safety addressed through development
- Each design team member responsible for safety in own discipline
- Hazards identified and resolved
- Safety addressed in preexercise briefing, simulator and evaluator packets
- Each field location examined for safety issues
- Safety officer designated, given authority

**Legal Liability**
- Legal questions of liability researched by local attorney

**Emergency Call-Off**
- Call-off procedure in place, including code word/phrase
- Call-off procedure tested

**Media**
- Role of media addressed in planning, used as a resource to gain favorable exposure
- Media and observers considered in logistical planning
Activity: Plan Ahead for the Full-Scale Exercise

Think about your organization or jurisdiction in relation to the special design considerations just discussed. Are there special problems you may need to work around when designing a full-scale exercise? Do you have ideas about how to make use of particular situations or locations? (Remember the description in Unit 1 of the building collapse exercise that was built around the planned destruction of a sports arena in Denver.)

In the space below, record notes that will help you remember your ideas about planning for a full-scale exercise in the future.

---

Site Selection:

---

Scene Management:

---

Personnel and Resources:
Activity: Plan Ahead for the Full-Scale Exercise (Continued)

Response Capability:

Safety:

Legal Liability:

Emergency Call-Off:

The Media:
Summary and Transition

Unit 7 was the third of three units providing in-depth information about specific types of exercises. This unit provided information about the full-scale exercise, including key characteristics and special planning considerations. The next unit will focus on exercise evaluation.

For More Information

- Lessons Learned from Exercises and Incidents
  
  www.nrt.org/epa/nrt/home.nsf

  Media descriptions of past full-scale exercises:

  - Response ’95:  www.fema.gov/nwz95/95_106.htm
  - Ames/Moffett Airfield exercise:  www.fema.gov/mobex/resprep01.htm
  - Lessons learned from “TOPOFF”:  www.cdc.gov/ncidod/eid/vol6no6/hoffman.htm
Knowledge Check

Carefully read each question and all of the possible answers before selecting the most appropriate response for each test item. Circle the letter corresponding to the answer that you have chosen.

1. A full-scale exercise involves:
   a. All levels of personnel, including response personnel.
   b. Primarily the key policy and decision makers.
   c. Policy, coordination, and operations personnel.
   d. The staff from one department or unit.

2. In a full-scale exercise, simulators:
   a. Are not required.
   b. Have a somewhat different role than in a functional exercise.
   c. Have the same role as in a functional exercise.
   d. Play the roles of all field personnel.

3. In a full-scale exercise the narrative is largely replaced by:
   a. Scripted messages.
   b. The exercise directive.
   c. A staged scene representing the emergency.
   d. The Player Handbook.

4. ______________ is a good use of a full-scale exercise.
   a. Testing emergency procedures and coordination of multiple agencies or organizations
   b. Trying out a new and untested emergency plan
   c. Training personnel in negotiation
   d. Practicing group problem solving in a nontargeting environment

5. A full-scale exercise:
   a. Does not use prescripted messages.
   b. Uses only visual and action messages.
   c. May include visual, action, and prescripted messages.
   d. Uses the visual narrative in place of messages.

6. In a full-scale exercise, all decisions and actions by players occur in real time and generate real responses and consequences from other players.
   a. True
   b. False
Knowledge Check (Continued)

7. The best way to begin a full-scale exercise is to gather all of the participants in a central location for a briefing that explains the objectives, roles, responsibilities, and ground rules.
   a. True
   b. False

8. ________________ is a major difference between full-scale and functional exercises.
   a. Formal evaluation
   b. Lead role of the controller
   c. Activation of the EOC
   d. Field-based action

9. Because field actions lead to decisions and further action in a full-scale exercise, it is unnecessary to develop a list of major and detailed events.
   a. True
   b. False

10. If you want to test response to a terrorist bomb attack, a good approach would be to stage an unannounced full-scale exercise at a sports arena during a professional game attended by thousands of spectators.
    a. True
    b. False

11. In designing a full-scale exercise, it is usually advisable to exclude the media and the public.
    a. True
    b. False
Knowledge Check (Continued)

1. a
2. b
3. c
4. a
5. c
6. a
7. b
8. d
9. b
10. b
11. b
Unit 8: Exercise Evaluation
Introduction

Evaluation is the process of observing and recording exercise activities, comparing the performance of the participants against the objectives, and identifying strengths and weaknesses.

Evaluation is a very complex topic, and this unit provides only a very general overview. In this unit, we will briefly discuss the importance of evaluation and its relationship to exercise development, evaluation team structure and duties, key aspects of evaluation methodology, and evaluation tasks that happen after the exercise is finished.

Unit 8 Objectives

After completing this unit, you should be able to:

- Describe the need for a systematic approach to exercise evaluation.
- Identify and explain the tasks in the exercise evaluation process.
Integrating Evaluation Throughout Development

As you have seen in the previous units, exercise development is a continuous process that begins long before the exercise and continues after the exercise is over. It continues until needed changes have been made and suggestions have been incorporated into the next exercise.

Evaluation is not something that is done when all of the action is over. It begins when exercise design begins, when objectives are developed. You encountered the following chart in Unit 3. Notice again the kinds of evaluation activities that occur in the three exercise phases. In the remainder of this unit, we will take a brief look at each of the major evaluation activities listed in this chart.

<table>
<thead>
<tr>
<th>Task Categories</th>
<th>Preexercise Phase</th>
<th>Exercise Phase</th>
<th>Postexercise Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Review plan</td>
<td>Prepare facility</td>
<td>Assess achievement of objectives</td>
</tr>
<tr>
<td></td>
<td>Assess capability</td>
<td>Assemble props and other enhancements</td>
<td>Participate in postexercise meetings</td>
</tr>
<tr>
<td></td>
<td>Address costs and liabilities</td>
<td>Brief participants</td>
<td>Prepare evaluation report</td>
</tr>
<tr>
<td></td>
<td>Gain support/Issue exercise directive</td>
<td>Conduct exercise</td>
<td>Participate in followup activities</td>
</tr>
<tr>
<td></td>
<td>Organize design team</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draw up a schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Design exercise (8 design steps, including developing objectives)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select evaluation team leader</td>
<td>Observe assigned objectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop evaluation methodology</td>
<td>Document actions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select and organize evaluation team</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Train evaluators</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why Evaluate the Exercise?

For an emergency management system to be effective, it is critical that the personnel, plans, procedures, facilities, and equipment be exercised and tested on a regular basis. Yet no amount of exercising will be constructive unless each exercise is followed by a structured evaluation that enables the emergency management organization to identify successes and shortfalls.

Good evaluation can help the organization identify:

- Whether the exercise has achieved its objectives.
- Needed improvements in the EOP, procedures, or guidelines.
- Needed improvements in the emergency management system.
- Training and staffing deficiencies.
- Needed operations equipment.
- Need for continued exercising of the plan and the emergency management functions.

If these goals are to be met, the evaluation approach must be systematic—methodical in procedure, thorough, and organized.
The Evaluation Team

In the early stages of exercise design, a number of people will be brought together into a design team, led by a design team leader or exercise director. One member of this team will become the evaluation team leader, or chief evaluator, and this person will in turn select the members of the evaluation team.

Team Structure

The size and composition of the evaluation team will depend on the type of exercise, its complexity, and the availability of people to serve. A small exercise with limited objectives, few participating organizations, and only a few locations might need only a team leader and three to six evaluators. A group this small would report directly to the team leader.

A large full-scale exercise might require an evaluation director to supervise several team leaders at different sites—who in turn supervise several evaluators. With a team of this size, the various evaluators would be assigned to serve at selected sites and a means of coordination or communication set up among them. An organizational chart would be helpful to keep lines of authority straight.

Role of the Team Leader

**What?** The evaluation team leader is primarily responsible for the evaluation methodology, for selecting and training the evaluation team, and for preparing the evaluation report.

**Who?** Ideally, the team leader should have experience in evaluation, management, exercise design or participation, and training or education. Normally, he or she should be a member of the design team. In some cases, it might be necessary to bring in someone from outside the design team, although that is usually unnecessary if a volunteer training and exercise officer is on the design team and is willing to serve. (Other design team members are likely to be too heavily involved in developing the exercise.)
The Evaluation Team (Continued)

When? Selecting the evaluation team leader as early in the design process as possible has several advantages:

- It will ensure that the evaluation becomes an integral part of the exercise development effort.
- It will maintain the integrity of the evaluation function and prevent it from overlapping with the control and simulation functions.
- It will ensure that at least one person can devote time and mental effort to the large task of evaluation.

Selection of Team Members

The evaluation team leader is responsible for selecting and training the evaluation team. The ideal evaluator has many skills and personal attributes. Although it may not be possible to find a person who has all of these characteristics, the team leader will be looking for the following:

<table>
<thead>
<tr>
<th>Skills</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate technical expertise in evaluation</td>
<td>“People skills,” sensitivity</td>
</tr>
<tr>
<td>Communication skills, both verbal and written</td>
<td>Objectivity</td>
</tr>
<tr>
<td>Organizational ability</td>
<td>Self-motivation</td>
</tr>
<tr>
<td>Ability to see the relationship between events and objectives</td>
<td>Willingness to help</td>
</tr>
<tr>
<td>Ability to adjust to rapidly changing situations</td>
<td>Honesty and integrity (reports facts truthfully, keeps information confidential)</td>
</tr>
<tr>
<td></td>
<td>Familiarity with the plan</td>
</tr>
</tbody>
</table>

Often an evaluation team can be assembled by using a little imagination and beating the bushes. Evaluators can be drawn from various sources, including:

- Neighboring jurisdictions.
- Emergency services personnel who will not be playing in the exercise.
- Professional evaluators.
- State or Federal personnel.
- College or university faculty.
- Public service organizations.
The Evaluation Team (Continued)

Training of Team Members

The training of an evaluation team usually can be done in an orientation meeting. The nature and length of the meeting will depend on the experience and skill of the members. Most evaluators—no matter how experienced—will need information on:

- The exercise scenario.
- Rules of play.
- The objectives.
- Evaluation requirements and procedures.
- Evaluation forms.

Inexperienced evaluators may need some practice drills. Evaluators from outside the organization/jurisdiction will need information about the organization/jurisdiction.

Try to Be Unobtrusive

It is well documented that the presence of an evaluator can affect the behavior of those being observed, possibly resulting in inaccurate data. Therefore, the evaluation team should plan ways to observe that are as unobtrusive as possible. Examples include:

- Being in position when the exercise begins so as not to attract attention.
- Postponing taking notes for a few minutes until players get involved in the play and stop noticing them.
Evaluation Methodology

Evaluation methodology is simply the procedures and strategy used to evaluate an exercise. The methodology includes:

- How the evaluation team will be structured.
- Objectives to be measured.
- Evaluation packet.

Defining the Team Structure

Aspects of the team structure will have a significant impact on how the evaluation proceeds. Therefore, decisions such as the following are an important part of the methodology:

- Number of evaluators and their evaluation-related experience and knowledge.
- Organization of evaluators at multiple sites (i.e., subteams).
- Lines of authority (e.g., evaluators, supervisors or team leaders, chief evaluator).
- Communication and coordination among team members.

Evaluation Criteria

One of the first steps in developing the methodology is to determine the criteria that will be used to determine if the exercise is successful. These criteria are tied to the objectives and expected actions.

At the outset of exercise design, the general objectives are defined. Then, in developing the scenario, the general objectives are broken into smaller units—the expected actions. From the expected actions, specific points of review and other evaluation measures can be developed.
Evaluation Methodology (Continued)

As discussed in Unit 4, the objectives must be stated clearly and precisely, describing actions that can be observed and measured. Using the SMART system will ensure that objectives are:

- Simple.
- Measurable.
- Achievable.
- Realistic.
- Task-oriented.

You may wish to review the material in Unit 4 now to refresh your memory about the important elements of good objectives.

Evaluation Packet

The evaluation packet, or Evaluation Plan, contains all plans for the collection of data, including objectives and points of review, checklists or other evaluation forms, and observation techniques. A sample Evaluation Plan, with instructions for customizing it for a specific exercise, is provided in the *Exercise Design* Tool Box, available at http://training.gov/emiweb/IS/is139lst.asp.

Data can be collected by various means, such as evaluation forms, running written narrative, audiotape, or videotape. Each method has advantages and disadvantages, which should be considered in developing the methodology. Some suggestions are on the next page.
Evaluation Methodology (Continued)

Suggested Evaluation Strategies

- **Plan the observation process.** One approach is to use these four steps:
  
  1. Recall the specific objectives of the exercise, the detailed events, and the actions or decisions that they suggested.
  2. Identify the players expected to take the actions or make decisions as those who should be observed.
  3. Locate evaluators in a position to observe the players.
  4. Brief the evaluators on what actions or decisions are expected.

- **Provide points of review** to guide evaluators. They make it possible to be very objective in collecting data.

  **Example:**

  **Objective:** Demonstrate the adequacy of displays to support the emergency operations during the exercise.

  Points of Review: YES NO
  - Status boards available in facility
  - Status boards utilized
  - Status boards kept updated
  - Maps available
  - Maps up to date

- **Provide evaluation forms.** They may include simple questionnaires, checklists, or rating sheets on which observations are recorded. They need not be complicated, but they must be objective, simple, and specific.
Evaluation Methodology (Continued)

The following table illustrates a checklist for carrying out the four observation steps. (Note: This checklist also appears as Job Aid 19 in Appendix A.)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Decision to Look For</th>
<th>Players to Observe</th>
<th>Where</th>
<th>Expected Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notify principals</td>
<td>Activate “call-down” procedure</td>
<td>Superintendent</td>
<td>In EOC, school</td>
<td>10:15</td>
</tr>
<tr>
<td>Emergency contact of bus drivers</td>
<td>“Call-down” procedure—phone</td>
<td>Transportation Supervisor</td>
<td>EOC, School player</td>
<td>11:05</td>
</tr>
<tr>
<td>School closure announcements on TV/radio</td>
<td>Message preparation and distribution</td>
<td>Superintendent, Emergency Manager, Media</td>
<td>EOC, Media player</td>
<td>11:10</td>
</tr>
<tr>
<td>Open cafeteria and gym for shelter</td>
<td>Notify media, opening and supplying facilities</td>
<td>Superintendent, Facilities</td>
<td>EOC, School player</td>
<td>12:20</td>
</tr>
</tbody>
</table>

**Key Event Monitoring**

Most exercise scenarios include a number of events specifically designed to put stress on selected elements of the plan. These are termed *key events*. Evaluators should pay special attention to these events.

When a key event message is input, the evaluators monitor the participants’ responses to the event. All responses should be noted on a Key Event Response Form. This form provides for multiple responses from several positions within the EOC as well as responses from outside the EOC.

**Problem Log**

The Problem Log allows participants, controllers, and simulators to document any observed action that may possibly create a problem. (While observing, it should be understood by everyone that what may seem to be a plan or procedure problem may actually be a participant or simulator error.)

These potential problems can then be analyzed after the exercise to determine which are serious enough to require corrective action and to determine their source(s)—plan, preparedness, training, or simulation.
Evaluation Methodology (Continued)

**Sample Forms**

Examples of the following forms are provided on the next few pages.  
(***Note:** These forms also appear as Job Aid 20-25 in Appendix A.)

- Evaluator Checklist
- Narrative Summary Form
- Key Event Response Form
- Problem Log
- Exercise Debriefing Log
- Exercise Critique Form
# Evaluator Checklist

**Evaluator:** __________________________  **Date:** ________________

**Location:** ___________________________

<table>
<thead>
<tr>
<th>Objective No.:</th>
<th>Function Being Evaluated:</th>
</tr>
</thead>
</table>

**Objective:**

**Performance Criterion [###]**

**Points of Review:**
Please answer the following:  **Y** = Yes,  **N** = No,  **NA** = Not Applicable,  **NO** = Not Observed

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>N</th>
<th>NA</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
# Narrative Summary

<table>
<thead>
<tr>
<th>Objective Number: ____________________</th>
<th>Criterion Number: ____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluator: __________________________</td>
<td>Location: _____________________</td>
</tr>
</tbody>
</table>

## Issue:
A specific statement of the problem, plan, or procedure that was observed.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

## Discussion:
A discussion of the issue and its specific impact on operational capability.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

## Corrective Action Recommendation:
Recommended course(s) of action to improve performance or resolve the issue to improve operational capability.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
Narrative Summary (Continued)

Office of Primary Responsibility:
The department, agency, or organization responsible for implementation of corrective actions.

Department, Agency, or Organization:


Individual Responsible:


Title: ________________  Date Assigned: __/__/__  Suspense Date: __/__/__
### Key Event Response Form

<table>
<thead>
<tr>
<th>Event No.</th>
<th>Scheduled Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initially Input To</td>
<td>Actual Date/Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response Date/Time</th>
<th>Position Responding</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Problem Log

Date: __________________________

Exercise Assignment: ____________________________  Tel. No: ______________________

<table>
<thead>
<tr>
<th>Time</th>
<th>Message Library No. (if known)</th>
<th>Problem</th>
<th>Analysis (Leave Blank)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Postexercise Meetings

There are two types of postexercise meetings: The player debriefing and meetings of the evaluation team.

Player Debriefing

A short exercise debriefing should be conducted with the players immediately after the exercise. This debriefing gives them an opportunity to have their say about how things went, what they think should be changed, and commitments that they might make.

This is how a debriefing generally goes:

- The controller conducts the debriefing, beginning with a review of broad objectives and commenting generally on both successes and shortfalls.
- The controller asks for a brief response (about 2 minutes each) from each player.
- As participants comment on their performance, the controller tries to maintain a balance between positive and negative comments and encourages everyone to contribute. Comments during the debriefing should be recorded for inclusion in the After Action Report. An Exercise Debriefing Log may be used for this purpose. An example is provided at the end of this section.
Postexercise Meetings (Continued)

- The debriefing is for exercise participants. If *evaluators* wish to say a few words, they should concentrate on all the positive aspects of the exercise.

- It is a good idea to prepare a simple *questionnaire* (such as the Exercise Critique Form) for participants to fill out after the exercise. People who hesitate to enter into group discussions will often respond to a questionnaire. One possible format is a set of objective questions requiring only a check mark response, along with some open-ended questions about the performance in general (e.g., “What was good or bad about the notification procedure?”).

**Keeping the Debriefing on Track**

The purpose of the debriefing is to examine player performance. However, players will often want to critique the exercise itself: It was too long, too short, had too many or too few messages. The goal is to keep the players on track, focusing on performance insofar as possible. Explain that they will have an opportunity later to provide input into exercise design.

Briefly review the Exercise Debriefing Log and Exercise Critique Form on the following pages. **Note:** These forms also appear as Job Aids 24 and 25, respectively, in Appendix A.
### Exercise Debriefing Log

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Recorder</th>
<th>Date</th>
<th>Problem Summary</th>
<th>Responsible Agency/Person</th>
<th>Recommended Action</th>
</tr>
</thead>
</table>
Exercise Critique Form

Please take a few minutes to fill out this form. Your opinions and suggestions will help us prepare better exercises in the future.

1. Please rate the overall exercise on the following scale.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very Good</td>
</tr>
</tbody>
</table>

2. Compared to previous exercises, this one was:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very Good</td>
</tr>
</tbody>
</table>

3. Did the exercise effectively simulate the emergency environment and emergency response activities? Yes _________ No _________

   If no, briefly explain why:

4. Did the problems presented in the exercise adequately test readiness capability to implement the plan? Yes _________ No _________

   If no, briefly explain why:
Exercise Critique Form (Continued)

5. The following problems should be deleted or revised:

6. I suggest that you add the following problems for the next exercise.

7. Please add any other comments or suggestions.
Postexercise Meetings (Continued)

**Evaluation Team Meetings**

Evaluation team meetings are held to analyze the exercise and prepare the After Action Report. Evaluation team meetings may include:

- A meeting of the evaluation team(s) shortly after the exercise to compare notes.

- A more formal meeting of the team a week or so later to analyze the findings and develop an accurate account of what worked and what did not. The team analyzes evaluation responses and any other data, and discusses how well each of the objectives was met.

- Additional meetings as needed to analyze data and prepare the report. The exercise design team may join the evaluation team at one or more meetings to offer feedback and suggestions. The report should be prepared within one to three weeks after the exercise, while memories are still fresh.

**After-Action Report**

The findings of the evaluation team meetings are compiled in the after-action report, which documents the effectiveness of the exercise. It serves as the basis for planning future exercises, upgrading the EOP or contingency plan, and taking corrective action.

The after-action report is the responsibility of the evaluation team leader or chief evaluator, working with the evaluation team.

**Form**

The report may take a variety of forms. For example, a small exercise may warrant only a brief summary of the minutes of the player debriefing, followed by a few recommendations. Sometimes a memo will do the job. For large exercises—particularly functional or full-scale exercises—the report should be specific and comprehensive.

**Format**

There is no set organizational plan for an after-action report. However, the topics listed in the following outline are usually covered.
After-Action Report (Continued)

Sample Report Outline

- **Introduction**  
  (Main purpose of the report, why it is being submitted, preview of main topics, evaluation methodology used, and perhaps a general summary of main problems and recommendations.)

- **Statement of the Problem**  
  (Purpose of the exercise)

- **Exercise Summary**  
  Goals and Objectives  
  Preexercise Activities  
  Participants and Agencies  
  Description of Exercise Scenario

- **Accomplishments and Shortfalls**  
  Evaluation Group Findings  
  Summary of Postexercise Debriefing

- **Recommendations**  
  Training Needs  
  Changes in the Emergency Plan  
  Other Corrective Actions

A copy of the after-action report should go to the chief elected official of the jurisdiction (or head of the organization involved) and each participating entity.

**Other Reporting Requirements**

Other types of exercise reports are often required by agencies mandating exercises. Often they are simple checklists which require less time to prepare than a full written report. Check with the appropriate regulatory agencies for specific reporting requirements.
Implementing Change

Recommendations for the future are the whole reason for conducting the exercise. The goals of an exercise are not achieved until the recommendations that come out of the evaluation are implemented. The purpose of the evaluation is to improve the emergency management plan and the organization's performance in carrying out that plan.

This is most likely to occur if objectives relate clearly to emergency functions and the focus of the evaluation is on performance, not people. Specifically, the change effort centers around these issues:

- Are the procedures sound?
- Are resources sufficient to support the procedures?
- Are personnel adequately trained to follow the procedures and use resources?

**Remember:** We test plans, but we train people.
Activity: Plan the Evaluation

In Unit 4, you completed several design steps for a tabletop or functional exercise. In that unit, you:

- Defined the scope.
- Wrote a statement of purpose.
- Developed three objectives.
- Outlined a narrative.
- Wrote two major events and two detailed events for each of them.
- Composed a message.

Review the materials that you developed in those activities, then complete the following questions with regard to the same exercise.

1. What size of evaluation team and what team structure would be appropriate for your exercise?

2. Who would you select for your evaluation team? What resources are available to you for obtaining qualified evaluators?

3. What kind of training would you provide for the evaluators?
Activity: Plan the Evaluation (Continued)

4. Briefly describe what evaluation methodology would be appropriate for your exercise. Consider:
   - Observation strategies.
   - Documentation.
   - Forms.
   - Followup.

5. What type of report should be prepared, and how will it be generated?

6. How would you ensure that needed changes are implemented after the exercise?
Summary and Transition

Unit 8 provided a general overview of the process for evaluating exercises. The next unit discusses materials and methods for enhancing an exercise simulation.

For More Information

FEMA exercise evaluation courses:

- Exercise Evaluation Course (G130):
  http://training.fema.gov/emiweb/nrcrs.htm

- Radiological Emergency Preparedness Exercise Evaluation (E304):
Knowledge Check

Carefully read each question and all of the possible answers before selecting the most appropriate response for each test item. Circle the letter corresponding to the answer that you have chosen.

1. Good evaluation can help the organization identify:
   a. Training and staffing deficiencies.
   b. Qualified members of the evaluation team.
   c. Exercise objectives.
   d. The scope of the exercise.

2. Evaluation begins when the exercise gets underway—usually when the narrative is presented.
   a. True
   b. False

3. It is usually best to keep the design team and the evaluation team separate and to bring in an outside evaluation team leader.
   a. True
   b. False

4. Every exercise should have an evaluation director, several teams of evaluators headed by team leaders, and a means of communicating among the teams.
   a. True
   b. False

5. The evaluation team leader is primarily responsible for the evaluation methodology, selecting evaluation team members, training the team, and preparing the evaluation report.
   a. True
   b. False

6. During the exercise, evaluators should:
   a. Ensure that players are aware of when they are being observed.
   b. Offer suggestions that can improve the exercise results.
   c. Focus on the positive.
   d. Avoid attracting players’ attention.
Knowledge Check (Continued)

7. One thing evaluators should focus on during an exercise is:
   a. Explaining evaluation methodology to the players being observed.
   b. Having players explain their reasons for actions taken.
   c. Noting what actions are taken in response to key events.
   d. Finding as many positive points as negative ones.

8. A constructive evaluation strategy would be to have players, simulators, and controllers document problems they observe during the exercise.
   a. True
   b. False

9. The main purpose of the postexercise debriefing is:
   a. To inform the participants of the evaluation results.
   b. To give the players a chance to comment on the exercise performance.
   c. To obtain feedback on the exercise design.
   d. To prepare the After Action Report.

10. The ________________ documents the effectiveness of the exercise and serves as the basis for taking corrective actions.
    a. Evaluation Plan
    b. Problem Log
    c. After Action Report
    d. Evaluator Checklist
Knowledge Check (Continued)

1. a
2. b
3. b
4. b
5. a
6. d
7. c
8. a
9. b
10. c
Unit 9: Exercise Enhancements
Introduction

Sometimes creativity is the difference between an adequate exercise design and one that really gets the participants excited and involved. This unit discusses the various ways in which you can enhance an exercise with equipment, displays, people, props, and other strategies.

Unit 9 Objectives

After completing this unit, you should be able to:

- Define the purpose of exercise enhancements.
- Identify resources available for exercise enhancement.
- Describe the benefits of specific exercise enhancement techniques.
**Why Use Enhancements?**

The point of an exercise is to simulate an emergency as realistically as the type of exercise warrants. The more realistic the scenario, the setting, the atmosphere, and the equipment and materials made available to the participants, the more likely it is that the players will "get into" the action and get the most out of it.

A variety of exercise enhancements can help achieve this realism. In a drill or full-scale exercise, the use of real equipment and actual locations is inherently realistic. Added touches—such as simulated victims with convincing mock injuries—can make a functional or full-scale exercise even more realistic.

A tabletop or functional exercise must rely on materials and devices that you can bring into a room to make the exercise more realistic.

It’s not necessary to spend a lot of money or energy to enhance realism. Resources can include ordinary items that are currently available in the operations center or command post, or common items that can be easily obtained.

**Creativity**

Creativity is the key to good enhancements. There are many low-cost creative approaches you can try. Here are some examples:

- Videotape simulated “news broadcasts” depicting the disaster and taped interviews with “victims.” Show these prerecorded clips as part of the exercise.

- Audiotape news broadcasts and play them on the radio.

- Use make-up and props to simulate injuries.

- Use computers to chart plumes and provide data on river flows.

- If the telephone system is down as part of the exercise, leave the telephones in the EOC but don’t connect them.

- If power is supposed to be out, then actually run a backup generator. Turn off the lights and computers if they’re not hooked up to the generator. (Of course, this can disrupt the real office work flow, but it will result in a more realistic exercise.)

These are just a few examples to get your creative juices flowing. We’ll discuss more ideas in the remainder of the unit, and you will undoubtedly have ideas of your own. That’s the whole idea!
Communications Equipment

Various types of electronic equipment can be used to communicate the narrative and advance the scenario. Communications equipment can also be used to transmit some of the messages from simulators. In a highly simulated exercise, such as a complex functional exercise, try to transmit messages as you would in a real emergency—by phone, radio, and TV.

**Take Advantage of What’s Available**

There are always financial limitations, so plan to make use of the communications equipment that your community normally has available during an emergency. Consider the following:

- Landlines and cellular telephone
- Radio phones and portable/handheld radios
- Hotline dedicated phones
- Military phone hookups
- Citizens’ Band (CB)
- Teletype systems and fax machines
- Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES)
- Monitors/scanners
- National Oceanic Atmospheric Administration (NOAA) Weather Radio
- National Warning System (NAWAS)
- Computerized Radio Packet
Visuals

No exercise is complete without a collection of visuals and displays: Maps, charts, status boards, black or white boards, chart paper and easels, and the like. Videotapes and slides, although more difficult to obtain, can also enhance the realism of your exercise.

Maps

Uses: Maps provide context and detail for a scenario. Because they are essential to the handling of an actual disaster, they are necessary for all types of exercises. Even in an orientation or a tabletop exercise, maps provide useful information and give players a clearer picture of the simulated event. For example, they may be used to position equipment or to determine the nearest facilities for resource deployment.

Formats: Maps may be reproduced on paper for individual use or displayed on a wall. Acetate overlays make it possible to mark off areas or monitoring points and to reuse the map.

Types: The types and number of maps required depends on the exercise type and the hazard being tested. Below is a partial list of maps that you may find useful.

<table>
<thead>
<tr>
<th>Types of Maps</th>
</tr>
</thead>
<tbody>
<tr>
<td>- City street maps</td>
</tr>
<tr>
<td>- County street maps</td>
</tr>
<tr>
<td>- Subdivision maps</td>
</tr>
<tr>
<td>- Sewer maps (mains/facilities)</td>
</tr>
<tr>
<td>- Water maps (mains/facilities)</td>
</tr>
<tr>
<td>- Electric maps (lines/facilities)</td>
</tr>
<tr>
<td>- Gas maps (lines/facilities)</td>
</tr>
<tr>
<td>- Flood plain maps</td>
</tr>
<tr>
<td>- Contour maps</td>
</tr>
<tr>
<td>- Police and fire district maps</td>
</tr>
<tr>
<td>- Center city (downtown) maps</td>
</tr>
<tr>
<td>- Facility maps (plant layout, rail yards, etc.)</td>
</tr>
<tr>
<td>- Weather maps</td>
</tr>
</tbody>
</table>

Sources: Good maps can be obtained from a number of agencies. Before trying your hand as a cartographer, try local municipal agencies such as the City Planning Commission, Department of Highways, Engineering Department, Public Works, etc. The U.S. Geological Survey (USGS) is another good source of maps related to earthquakes. FEMA’s National Flood Insurance Program has flood maps. NOAA has weather maps, satellite weather imagery, and weather photos.
Visuals (Continued)

**Charts Used in Exercises**

The accumulation and sharing of information is an important operations center function. To ensure coordinated and timely emergency response, visual displays allow everyone to comprehend quickly what actions have been taken and what resources and personnel are available.

Display needs will vary with the nature and scope of the exercise, but the charts listed below should be considered. Some displays are for use of the exercise staff only.

<table>
<thead>
<tr>
<th>Type of Chart</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem and Event Log</strong></td>
<td>• Large events display board for posting major events</td>
</tr>
<tr>
<td></td>
<td>• Should be available for all in the EOC to review, also useful for EOC shift-change briefings</td>
</tr>
<tr>
<td></td>
<td>• All major problems that are reported are entered on the log as they are received</td>
</tr>
<tr>
<td></td>
<td>• May be divided into columns: Nature of problem, problem number, assignment, response, remarks</td>
</tr>
<tr>
<td><strong>Damage Assessment Chart</strong></td>
<td>• Divided into columns: Areas reporting damage, time of report, extent of damage</td>
</tr>
<tr>
<td><strong>Facility Charts and Status Boards</strong></td>
<td>• Used to track facilities involved in the exercise so participants are aware of available resources (companion maps are useful); examples of facility charts:</td>
</tr>
<tr>
<td></td>
<td>• Hospitals: Beds available, blood and other supply needs, personnel</td>
</tr>
<tr>
<td></td>
<td>• Congregate care facilities (e.g., those run by Red Cross or social service agencies): Space available; status of food, water, bedding, medical stocks</td>
</tr>
<tr>
<td></td>
<td>• Law enforcement resources: Numbers and locations of sworn, reserve, and auxiliary personnel; status of mutual aid units</td>
</tr>
<tr>
<td></td>
<td>• Fire resources: Deployment and availability of fire units, status of fire mutual aid forms</td>
</tr>
<tr>
<td><strong>Organization Charts</strong></td>
<td>• Useful for staff as a means of anticipating what agencies should be coordinating or reporting to other agencies</td>
</tr>
<tr>
<td></td>
<td>• Optional</td>
</tr>
<tr>
<td><strong>Master Scenario of Events List</strong></td>
<td>• Mainly for controller’s use, to keep exercise on schedule; should not be seen by players</td>
</tr>
<tr>
<td></td>
<td>• Contains detailed sequence of events developed as part of scenario</td>
</tr>
<tr>
<td><strong>Simulation Plotting Map</strong></td>
<td>• Used by controller and simulators</td>
</tr>
<tr>
<td></td>
<td>• Depicts prescripted input exercise information</td>
</tr>
<tr>
<td></td>
<td>• Coded markers may be used to depict actions taken by various organizations (police, fire, medical/health, public works, utilities, Red Cross/voluntary agencies)</td>
</tr>
</tbody>
</table>
Visually (Continued)

**Videotapes and Slides**

Videotapes can provide a very realistic presentation of an emergency that can be used to introduce the narrative or to give updates. News reports and interviews with politicians and the public can be prerecorded to lend realism. Slides can be used for some of the same purposes.

**Computer Resources**

Many communities have their resources on a computerized inventory list. Where available, this inventory should be used during conduct of exercises to track resources.

**Miscellaneous Equipment and Supplies**

Sometimes exercise planners are so focused on the dramatic aspects of the exercise that they overlook common equipment and materials. Many of these items, available in most office stores at little cost, are indispensable.

---

### Equipment and Supplies to Consider

- Projector for overhead transparencies or slides
- Copy machine
- Portable radio
- Pagers and cellular phones
- Public address system
- Pens, pencils, and markers
- Chart paper
- Telephone books and directories
- Local and state contact lists
- EOC phone directory
- List of cellular phone numbers
- Name tags
- Resource lists
- Financial cost report form
People and Props

In a full-scale exercise, the sense of reality occurs through the use of actual equipment in the actual setting. In this setting, fire trucks and the local airport would be considered types of enhancements.

Designers of full-scale exercises also bring in real people or props to enhance the realism. For example, an exercise simulating a hotel fire could use:

- People playing the part of victims, made up to appear injured.
- Mannequins to represent the dead (or victims trapped under heavy beams).
- Fake smoke.
- Burnt boards and beams strategically placed at the event site.
- A contained fire that the fire department would be required to extinguish.

Some jurisdictions use considerable ingenuity in these matters—creating model cities to use in tabletop exercises or obtaining mannequins to substitute for humans in dangerous situations (e.g., trapped under a beam).

Such enhancements are limited only by budget, safety considerations, and the imagination. So let your creativity work to enhance the exercise you are planning!
Enhancement Resources

One of the problems that designers often face is how to obtain materials, people, and equipment that lend realism without breaking a very small budget. Consider soliciting volunteers and donations from other agencies in the community. Many are civic-minded and are happy to help out by lending equipment or providing volunteers to serve as victims. Below are some places to begin.

<table>
<thead>
<tr>
<th>Potential Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
</tr>
<tr>
<td>Schools and colleges</td>
</tr>
<tr>
<td>Business and industry</td>
</tr>
<tr>
<td>Chemical Transportation Emergency Center (CHEMTREC)</td>
</tr>
<tr>
<td>Boy and Girl Scouts</td>
</tr>
<tr>
<td>Search and rescue volunteers</td>
</tr>
<tr>
<td>Agencies</td>
</tr>
<tr>
<td>Railroads</td>
</tr>
<tr>
<td>The Salvation Army</td>
</tr>
<tr>
<td>Public transportation</td>
</tr>
<tr>
<td>Fire departments</td>
</tr>
<tr>
<td>Police departments</td>
</tr>
<tr>
<td>Chemical companies</td>
</tr>
<tr>
<td>Amateur radio clubs</td>
</tr>
<tr>
<td>Religious organizations</td>
</tr>
<tr>
<td>National Guard/Military</td>
</tr>
<tr>
<td>The American Red Cross</td>
</tr>
<tr>
<td>Service organizations (Elks, Lions, Rotary, etc.)</td>
</tr>
</tbody>
</table>

Costs and Liability

In obtaining resources, it is important to consider costs (both initial and hidden) and the potential for liability. For example, consider:

- Person hours expended in obtaining and returning equipment or materials.
- Potential for damage or replacement costs.
- Arrangements for timely returns when items are borrowed or volunteers are “on loan.” (Too often “victims” have been left at the scene of the emergency site or the hospital because transportation plans were not made.)
- Safety and liability concerns when using people and equipment. Be sure that provisions are in place for liability insurance and equipment replacement.
Enhancement Logistics

In planning for exercises, someone needs to take responsibility for managing the logistics related to enhancements. Be sure that the following questions are answered:

- How will enhancements be used?
- Where will props be placed?
- Who will be in charge of props?
- How will people and props be picked up, transported, and returned?
- What kind of return policy can be worked out for borrowed materials and equipment?
- In what condition must equipment be returned?
- Who will clean it?
- Is normal wear a concern?
Activity: Enhance a Scenario

Read the following scenario. What exercise enhancements could be used to add to the realism of this exercise? Write your ideas on the next page.

Functional Exercise: Potential Airplane Crash

Participating organizations: Local dispatch, fire, police, search and rescue, EMS, emergency manager, mayor, airport crash/fire rescue, public works, hospital

Location: Your EOC or operations center

A jumbo jet that has experienced an inexplicable in-flight engine problem en route from Panama to New York will need to make an emergency landing at a large airport along the route. Though plans have been made to land at a city 200 miles north that is suitable for landing an aircraft this size, the latest communication with the pilot indicates that the plane has lost engine power and is losing altitude too quickly to reach the airport. Although the runway at your airport is too short to accommodate a jumbo jet, the only hope to save any of the 285 passengers and crew is to attempt a landing here.

Conditions at the airport are clear, but the surrounding area is very dry as a result of a continuing drought, and a hot, dry wind is blowing.

The airport is in a suburban area. The likelihood of the pilot being able to control the huge plane and land within the runway limits is slim. The glide path passes over several high-density suburban housing developments.

The airport control tower has alerted its own crash/fire rescue (CFR) units and has requested that local emergency service units provide fire, police, medical, and search and rescue assistance.

Garbled radio communication from the airliner alerts the airport control tower that the plane’s hydraulic system is not functioning. The pilot’s last message indicates that he will be attempting a soft-impact landing, but the plane breaks apart, crashing into the housing development and sending debris and bodies over an area of approximately one square mile. Smoke is visible in the area. A major part of the fuselage is at the beginning of the runway. CFR units are proceeding to the main crash site. All available resources are en route. Traffic is at a standstill on the only roads leading to the site, however.
Activity: Enhance a Scenario (Continued)

What enhancements could be used to increase the realism of this scenario? Write your ideas below.

<table>
<thead>
<tr>
<th>Possible Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
Activity: Enhance a Scenario (Continued)

Suggested Answers

The following enhancements would contribute to the realism of this scenario. However, there are many ways to enhance an exercise, and you may have other ideas.

- City street maps.
- Subdivision maps for affected residential areas.
- Airport map.
- Fire district maps.
- Map/diagram of crash area, staging areas, command posts, ingress/egress routes (Acetate overlay for updating movement of equipment and personnel are suggested.)
- Resource status board showing available equipment (types, numbers) and assigned locations. (Computerized tracking if available.)
- ICS organization chart.
- Damage assessment chart.
- Communications equipment to simulate communications among all involved agencies.
- Prerecorded audiotape of pilot’s transmissions to tower.
- Prerecorded background-noise audiotape of crash site (sirens, fire, voices, etc.) for atmosphere (Could be accompanied by a prerecorded video footage of firefighting, smoke.)
- Master Scenario of Events List.
- Simulation plotting map.
Activity: Plan Enhancements for Your Exercise

Consider the exercise plans that you developed in Unit 4. Answer the following questions about possible enhancements for that exercise.

1. Where will participants be located? Describe what kinds of facilities would be the most effective.

2. What kinds of communication equipment (if any) would be most appropriate for the exercise? What is available in your EOC or other operations center? Where will you obtain what is not readily available?

3. Describe the visuals (maps, charts, status boards, computer resources, videotapes, slides, others) to be used, and where you can obtain them.
Activity: Plan Enhancements for Your Exercise (Continued)

4. How will you handle people and props?

5. What potential resources do you have for obtaining enhancements?

6. Who will be in charge of enhancement logistics?

7. What costs do you foresee associated with enhancements, and how will they be handled?
Summary and Transition

Unit 9 provided information about the types of enhancements that can be added to increase the realism of an exercise, including communications equipment, maps, charts, display boards, computer resources, videotapes and slides, miscellaneous equipment and supplies, people and props. In the next unit, you will have an opportunity to develop a functional exercise using the information and job aids provided throughout the course.

For More Information

- FEMA Disaster Mapping and Analysis Center:
- FEMA Flood Hazard Mapping:
- U.S. Geological Survey, National Mapping Information:
- NOAA National Climatic Data Center:
  [http://lwf.ncdc.noaa.gov/oa/ncdc.html](http://lwf.ncdc.noaa.gov/oa/ncdc.html)
- NOAA Photo Library:
- NOAA 3-D Weather Images:
Carefully read each question and all of the possible answers before selecting the most appropriate response for each test item. Circle the letter corresponding to the answer that you have chosen.

1. The purpose of exercise enhancements is to:
   a. Increase credibility with the public and the media.
   b. Make the exercise more fun so more personnel will participate.
   c. Increase the realism so participants will respond as they would in a real event.
   d. Make it easier on the controller and the simulators.

2. In most tabletop and functional exercises, messages can’t be transmitted without sophisticated communications equipment.
   a. True
   b. False

3. Because they are essential to the handling of an actual emergency, maps are necessary for all types of exercises.
   a. True
   b. False

4. _________ are an important enhancement because they allow everyone to comprehend quickly what actions have been taken and what resources and personnel are available.
   a. Charts
   b. People and props
   c. Slides
   d. Audiotapes and videotapes

5. It is a good idea to seek out potential sources of materials, people, and equipment in the local community to enhance an exercise.
   a. True
   b. False
Knowledge Check (Continued)

1. c
2. b
3. a
4. a
5. a
Unit 10: Designing a Functional Exercise
Introduction

In this unit you will put together all of the skills and knowledge that you have learned from previous units and develop a functional exercise. In Unit 4, you learned the eight exercise design steps:

1. Assess needs.
2. Define scope.
3. Write a statement of purpose.
4. Define objectives.
5. Compose a narrative.
6. Write major and detailed events.
7. List expected actions.
8. Prepare messages.

You have already practiced applying each of the design steps individually. Now you will put these steps together in one coordinated process. As an option, you may also develop the four major exercise documents (templates for which are found in the Exercise Design Toolkit at http://training.fema.gov/emiweb/IS/139lst.asp):

- Exercise Plan
- Control Plan
- Evaluation Plan
- Player Handbook
Unit 10 Objective

After completing this unit, you should be able to:

- Design a small functional exercise using the eight-step design process.

Select Your Exercise

In Unit 2, you outlined a comprehensive exercise program for your organization. Review that outline now. If you wish to revise or update the outline, you may do so.

Select a small functional exercise from your comprehensive plan. The exercise that you choose should be fairly small, for the sake of the time required to complete this course activity. If necessary, you may artificially limit a functional exercise in your plan.

If you used a functional exercise as the basis of your abbreviated design activities in Unit 4, you may either use the same exercise here (and develop it now in depth) or select a new one.

When you have selected your exercise, you may proceed with the design steps, as outlined in the remainder of this unit. As you undertake each design step, feel free to go back to earlier units and review the guidelines and examples that are provided.
Step 1: 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 or organization. Base your assessment on your review of the emergency plans and procedures and what you have learned from previous exercises or emergencies.

**Exercise Needs Assessment**

1. **Hazards**

   List the various hazards in your community or organization. What risks are you most likely to face? You can use the following checklist as a starting point. **Note:** If your community has already conducted a hazard analysis, that is the best resource.

   - Airplane crash
   - Dam failure
   - Drought
   - Epidemic (biological attack)
   - Earthquake
   - Fire/urban conflagration
   - Flood
   - Hazardous material spill/release
   - Hurricane
   - Landslide/mudslide
   - Mass fatality incident
   - Radiological release
   - Sustained power failure
   - Terrorism
   - Tornado
   - Train derailment
   - Tsunami
   - Volcanic eruption
   - Wildfire
   - Winter storm
   - Workplace violence
   - Other ______________________
   - Other ______________________
   - Other ______________________
Step 1: Assess Needs (Continued)

2. Secondary Hazards

What secondary effects from those hazards are likely to impact your organization?

- Communication system breakdown
- Power outages
- Transportation blockages
- Business interruptions
- Mass evacuations/displaced population
- Overwhelmed medical/mortuary services
- Other ________________________
- Other ________________________
- Other ________________________
- Other ________________________
- Other ________________________

3. Hazard Priority

What are the highest priority hazards? Consider such factors as:

- Frequency of occurrence.
- Relative likelihood of occurrence.
- Magnitude and intensity.
- Location (affecting critical areas or infrastructure).
- Spatial extent.
- Speed of onset and availability of warning.
- Potential severity of consequences to people, critical facilities, community functions, and property.
- Potential cascading events (e.g., damage to chemical processing plant, dam failure).

#1 Priority hazard:

#2 Priority hazard:

#3 Priority hazard:
Step 1: Assess Needs (Continued)

4. Area

What geographic area(s) or facility locations are most vulnerable to the high priority hazards?

5. Plans and Procedures

What plans and procedures—emergency response plan, contingency plan, operational plan, Standard Operating Procedures (SOPs)—will guide your organization’s response to an emergency?

6. Functions

What emergency management functions are most in need of rehearsal? (E.g., what functions have not been exercised recently? Where have difficulties occurred in the past?) You can use the following checklist as a starting point.

- Alert Notification (Emergency Response)
- Warning (Public)
- Communications
- Coordination and Control
- Emergency Public Information
- Damage Assessment
- Health and Medical
- Individual/Family Assistance
- Public Safety
- Public Works/Engineering
- Transportation
- Resource Management
- Continuity of Government or Operations
- Other ___________________________
- Other ___________________________
- Other ___________________________
Step 1: Assess Needs (Continued)

7. Participants

Who (agencies, departments, operational units, personnel) needs to participate in an exercise? For example:

- Have any entities updated their plans and procedures?
- Have any changed policies or staff?
- Who is designated for emergency management responsibility in your plans and procedures?
- With whom does your organization need to coordinate in an emergency?
- What do your regulatory requirements call for?
- What personnel can you reasonably expect to devote to developing an exercise?

8. Program Areas

Mark the status of your emergency program in these and other areas to identify those most in need of exercising.

<table>
<thead>
<tr>
<th></th>
<th>New</th>
<th>Updated</th>
<th>Exercised</th>
<th>Used in Emergency</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Annex(es)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Operating Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maps, Displays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting Requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notification Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutual Aid Pacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policymaking Officials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinating Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer Organizations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOC/Command Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Emergency Preparedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Emergency Preparedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damage Assessment Techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 1: Assess Needs (Continued)

9. Past Exercises

If your organization has participated in exercises before, what did you learn from them, and what do the results indicate about future exercise needs? For example, consider the following questions:

- Who participated in the exercise, and who did not?
- To what extent were the exercise objectives achieved?
- What lessons were learned?
- What problems were revealed, and what is needed to resolve them?
- What improvements were made following past exercises, and have they been tested?
Step 2: Define the Scope

Working from your needs assessment and the Self-Assessment that you completed in Unit 3 about your organization’s readiness for the exercise process, define the scope of the exercise (i.e., draw some meaningful limits). Make decisions according to (a) highest priority and (b) what can be realistically addressed in one exercise. Record your decisions below.

**Scope Worksheet**

1. Highest priority hazards (major and secondary):

2. Geographic areas/locations of greatest vulnerability to these hazards:

3. Agencies/departments/organizational units: List below the entities that have a significant role in emergency management/response. Then enter check marks in any columns that apply.

<table>
<thead>
<tr>
<th>Agency/Organization</th>
<th>Limited experience with major emergencies</th>
<th>New plans, staff, or organizational structure not yet exercised</th>
<th>Problems revealed in prior exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 2: Define the Scope (Continued)

4. Types/levels of personnel that you want to have in the exercise:
   - Policy making (elected officials, chief operating officers, department heads)
   - Coordination (managers, EOC representatives, department deputies)
   - Operations (field personnel, headquarters staff level)
   - Public representatives (media, PIOs, general public)
   - Other: _____________________________________

5. Types of operations/functions that you want participants to engage in (e.g., notification, evacuation):

6. Degree of stress, complexity, time pressure that the exercise should have:

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Complexity</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Time pressure</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>
### Step 2: Define the Scope (Continued)

<table>
<thead>
<tr>
<th>Scope:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Emergency:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
<tr>
<td>Functions:</td>
</tr>
<tr>
<td>Organizations and Personnel:</td>
</tr>
<tr>
<td>Exercise Type:</td>
</tr>
</tbody>
</table>
Step 3: Write a Statement of Purpose

Develop your statement of purpose using the following template.

Statement of Purpose

The purpose of the proposed emergency management exercise is to improve the following emergency operations:

a. __________________________
b. __________________________
c. __________________________
d. __________________________

by involving the following agencies/organizations/departments:

a. __________________________
b. __________________________
c. __________________________
d. __________________________
e. __________________________
f. __________________________
g. __________________________
h. __________________________

in a __________________________ exercise simulating a __________________________
[type of exercise] [type of emergency event]
at __________________________ on ___________________.
[location] [date]
Step 4: Define the Objectives

In the space below, write objectives that support the purpose statement that you composed in the last step. Remember the SMART system: Simple, Measurable, Achievable, Realistic, Task-oriented. Use extra paper if needed.

**Objectives**

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Objective</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 5: Compose a Narrative

Outline the key points in your narrative using the following worksheet, then compose the script for the initial narrative in your exercise.

<table>
<thead>
<tr>
<th>Narrative Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event:</td>
</tr>
<tr>
<td>How fast, strong, deep, dangerous:</td>
</tr>
<tr>
<td>How you found out:</td>
</tr>
<tr>
<td>Response made:</td>
</tr>
<tr>
<td>Damage reported:</td>
</tr>
<tr>
<td>Sequence of events:</td>
</tr>
<tr>
<td>Current time:</td>
</tr>
<tr>
<td>Advance warning:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
</tbody>
</table>
Step 5: Compose a Narrative (Continued)

<table>
<thead>
<tr>
<th>Relevant weather conditions:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Other factors that would influence emergency procedures:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Predictions:</th>
</tr>
</thead>
</table>
Step 5: Compose a Narrative (Continued)

Narrative Script
Step 6: Write Major and Detailed Events

In the space provided on the following pages, list events that might occur in your emergency scenario. Break down each of the major events into two or three detailed events.

Step 7: List Expected Actions

For each detailed event, write some actions that you would expect from participants involved in the exercise. Be sure to tie them to specific objectives. (Note: You may wish to number the detailed events and expected actions for later reference.)
Step 7: List Expected Actions (Continued)

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Major Events</th>
<th>Detailed Events</th>
<th>Expected Actions Planning Sheet</th>
<th>Organizations</th>
</tr>
</thead>
</table>

...
**Step 8: Prepare Messages**

In the following message planning sheet, plan messages that will generate all of the expected actions that you identified. Then, compose the messages using the forms that follow.

<table>
<thead>
<tr>
<th>Detailed Events</th>
<th>Expected Actions</th>
<th>Organizations</th>
<th>Message Outline</th>
<th>Message Planning Sheet</th>
</tr>
</thead>
</table>
Step 8: Prepare Messages (Continued)

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>To:</td>
<td>To:</td>
</tr>
<tr>
<td>Method:</td>
<td>Method:</td>
</tr>
<tr>
<td>From:</td>
<td>From:</td>
</tr>
<tr>
<td>Content:</td>
<td>Content:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>To:</td>
<td>To:</td>
</tr>
<tr>
<td>Method:</td>
<td>Method:</td>
</tr>
<tr>
<td>From:</td>
<td>From:</td>
</tr>
<tr>
<td>Content:</td>
<td>Content:</td>
</tr>
</tbody>
</table>
## Step 8: Prepare Messages (Continued)

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>To:</td>
<td>To:</td>
</tr>
<tr>
<td>Method:</td>
<td>Method:</td>
</tr>
<tr>
<td>From:</td>
<td>From:</td>
</tr>
<tr>
<td>Content:</td>
<td>Content:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>To:</td>
<td>To:</td>
</tr>
<tr>
<td>Method:</td>
<td>Method:</td>
</tr>
<tr>
<td>From:</td>
<td>From:</td>
</tr>
<tr>
<td>Content:</td>
<td>Content:</td>
</tr>
</tbody>
</table>
### Step 8: Prepare Messages (Continued)

<table>
<thead>
<tr>
<th>To:</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method:</td>
<td>Emergency Exercise Message</td>
</tr>
<tr>
<td>From:</td>
<td></td>
</tr>
<tr>
<td>Content:</td>
<td></td>
</tr>
</tbody>
</table>

| To: |
| Method: |
| From: |
| Content: |

| To: |
| Method: |
| From: |
| Content: |

| To: |
| Method: |
| From: |
| Content: |
### Step 8: Prepare Messages (Continued)

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To:</strong></td>
<td><strong>To:</strong></td>
</tr>
<tr>
<td><strong>Method:</strong></td>
<td><strong>Method:</strong></td>
</tr>
<tr>
<td><strong>From:</strong></td>
<td><strong>From:</strong></td>
</tr>
<tr>
<td><strong>Content:</strong></td>
<td><strong>Content:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To:</strong></td>
<td><strong>To:</strong></td>
</tr>
<tr>
<td><strong>Method:</strong></td>
<td><strong>Method:</strong></td>
</tr>
<tr>
<td><strong>From:</strong></td>
<td><strong>From:</strong></td>
</tr>
<tr>
<td><strong>Content:</strong></td>
<td><strong>Content:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Exercise Message</th>
<th>Emergency Exercise Message</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To:</strong></td>
<td><strong>To:</strong></td>
</tr>
<tr>
<td><strong>Method:</strong></td>
<td><strong>Method:</strong></td>
</tr>
<tr>
<td><strong>From:</strong></td>
<td><strong>From:</strong></td>
</tr>
<tr>
<td><strong>Content:</strong></td>
<td><strong>Content:</strong></td>
</tr>
</tbody>
</table>
Constructing the Master Scenario of Events List

In the space below, develop a Master Scenario of Events List (MSEL) for the exercise that you have just designed.

<table>
<thead>
<tr>
<th>Time</th>
<th>Message/Event</th>
<th>Expected Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Constructing the Master Scenario of Events List (Continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Message/Event</th>
<th>Expected Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Planning the Exercise Evaluation

In the space below, briefly describe your plan for evaluating the exercise.

Exercise Evaluation Plan

1. Evaluation Team:
   - How many members and what team structure?
   - Who will you select, and where will you recruit them?
   - What kind of training will be provided?
Planning the Exercise Evaluation (Continued)

2. What methodology will be used to evaluate the exercise?

- Observation strategies:

- Documentation:

- Forms:

- Followup (What type of report? How will you ensure that needed changes are implemented?)
Planning the Exercise Enhancements

Using the following form, indicate your plans for facilities, displays, materials, equipment, and other exercise enhancements.

Exercise Enhancements

Communications Equipment:

- Hard-line telephone
- Radio phones
- Hot-line dedicated phones
- Portable/hand-held radios
- Cellular telephones
- Military phone hook-ups
- Citizens’ Band (CB)
- Teletype systems
- Fax machines
- Amateur Radio Emergency Service (ARES)
- Radio Amateur Civil Emergency Service (RACES)
- Monitors/scanners
- NOAA Weather Radio
- National Warning System (NAWAS)
- Computerized Radio Packet

Maps:

- City street maps
- County street maps
- Subdivision maps
- Sewer maps (mains/facilities)
- Water maps (mains/facilities)
- Electric maps (lines/facilities)
- Gas maps (lines/facilities)
- Flood plain maps
- Contour maps
- Police and fire district maps
- Center city (downtown) maps
- Facility maps (plant layout, rail yards, etc.)
- Weather maps
Planning the Exercise Enhancements (Continued)

Charts:
- Problem and Event Log
- Damage assessment chart
- Facility charts
- Status boards (specify):
  - Organization charts
  - Simulation plotting map
  - Other:

Other:
- Computer resources
- Videotapes
- Audiotapes
- Slides
- Projector
- Copy machine
- Portable radio
- Pagers and cellular phones
- Public address system
- Pens, pencils, and markers
- Chart paper
- Telephone books and directories
- Local and state contact lists
- EOC phone directory
- List of cellular phone numbers
- Name tags
- Resource lists
- Financial cost report form
Optional Activity: Exercise Design Documents

Using the templates provided in the Exercise Design Tool Box (see the “Templates” directory), develop the following documents for the functional exercise you have just designed:

- Exercise Plan
- Control Plan
- Evaluation Plan
- Player Handbook
Summary and Transition

Unit 10 provided an opportunity for you to apply the entire exercise design process in developing a functional exercise. Unit 11 will provide a brief course review and the final exam.
Unit 11: Course Summary
Introduction

This unit will briefly summarize the learning from the Exercise Design course. After completing this unit you should be able to summarize the key points of this course.

Reasons to Exercise

Exercises are conducted in order to evaluate an organization’s capability to execute one or more portions of its response plan or contingency plan. Exercises can be used to provide individual training and improve the emergency management system. Reasons to perform exercises include:

- Testing and evaluating plans, policies, and procedures.
- Revealing planning weaknesses and resource gaps.
- Improve individual performance and organizational coordination and communications.
- Train personnel and clarify roles and responsibilities.
- Gain program recognition.
- Satisfy regulatory requirements.

Comprehensive Exercise Program

A comprehensive exercise program is made up of progressively complex exercises, each one building on the previous one, until the exercises are as close to reality as possible. The program must be carefully planned to achieve identified goals and should involve a wide range of organizations in its planning and execution.
Comprehensive Exercise Program (Continued)

**Types of Exercises**

There are five main types of activities in a comprehensive exercise program:

- **Orientation seminar**: This is a low-stress, informal discussion in a group setting with little or no simulation. It is used to provide information and introduce people to policies, plans, and procedures.

- **Drill**: This is a coordinated, supervised exercise used to test a single specific operation or function. It involves deployment of equipment and personnel.

- **Tabletop exercise**: This is a facilitated group analysis of an emergency situation in an informal, stress-free environment. It is designed for examination of operational plans, problem identification, and in-depth problem solving.

- **Functional exercise**: This is a fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event. It takes place in the EOC and focuses on coordination of multiple functions or organizations. Strives for realism, short of actual deployment of equipment and personnel.

- **Full-scale exercise**: This is a simulated emergency event, as close to reality as possible. It involves all emergency response functions and requires full deployment of equipment and personnel.

**Building an Exercise Program**

Building an exercise program is a multi-organization team effort that includes:

- Analysis of capabilities and costs.
- Goal setting.
- Development of a long-term plan.
- Scheduling of tasks.
- Public relations efforts.
The Exercise Process

The process of creating and staging an exercise includes a lengthy sequence of tasks that occur in three phases: Before, during, and after the exercise. Some of the tasks fall under the heading of design and some are part of evaluation.

Major Task Accomplishments

A simple way of viewing the exercise process is the sequence of five major task accomplishments:

1. Establishing the base
2. Exercise development
3. Exercise conduct
4. Exercise critique and evaluation
5. Exercise followup

Establishing the Base

Establishing the base is the process of laying the groundwork for the exercise. Some important aspects of this preparation are:

- Reviewing the current plan.
- Assessing capability to conduct an exercise.
- Addressing costs and liabilities.
- Gaining support.
- Assembling and organizing a design team.
The Exercise Process (Continued)

**Exercise Documents**

Four major documents are developed during the exercise design process:

- Exercise Plan
- Control Plan
- Evaluation Plan
- Player Handbook

These documents are basically handbooks for particular audiences. Much of the content of these documents comes from the eight exercise design steps.

**Exercise Design Steps**

Tabletop, functional, and full-scale exercises are based on a design process that includes eight steps:

1. Assess needs.
2. Define scope.
3. Write a statement of purpose.
4. Define objectives.
5. Compose a narrative.
6. Write major and detailed events.
7. List expected actions.
8. Prepare messages.

These are generally applicable steps regardless of the type of exercise. However, each type of exercise has some special considerations in how these steps are applied.
Exercise Design Steps (Continued)

Master Scenario Events List

Outputs from the design process are pulled together in the MSEL, a chart that the controller and simulators can use in keeping the exercise on track and on schedule.

The Tabletop Exercise

Exercise Format

The tabletop exercise is essentially a group brainstorming session centered on a scenario narrative and problem statements or messages that are presented to members of the group. The format is informal, and the exercise is self-evaluated by the participants.

Facilitating a Tabletop

The facilitator is responsible for:

- Setting the stage.
- Distributing messages.
- Stimulating discussion and pushing participants toward in-depth problem solving.
- Involving everyone.
- Controlling and sustaining the action.
The Tabletop Exercise (Continued)

Designing a Tabletop

In applying the eight design steps, the first four steps (needs assessment, scope, purpose statement, objectives) are handled in the normal manner. The remaining steps can be simplified:

- The narrative can be relatively short.
- Only a few major or detailed events are required, and they are turned into problem statements.
- Expected actions must be identified, but they may involve such things as discussion or reaching consensus.
- Only a few (e.g., 10–15) carefully written messages or problem statements are needed.

The Functional Exercise

Exercise Format

The functional exercise usually takes place in the operating center and involves policy makers and decision makers. It uses an event scenario to test multiple functions or organizations, emphasizing coordination and communication. Participants include the:

- Controller (the manager of the exercise).
- Players (people responding to the scenario within their normal roles).
- Simulators (people playing the parts of organizations and field units outside of the operations center, who deliver messages to players).
- Evaluators (observers who record actions taken in response to messages).

Participants respond in real time, adding an element of stress to the exercise. Communications equipment, displays, and other enhancements can be used to add to the realism.
The Functional Exercise (Continued)

Controlling a Functional Exercise

The controller is responsible for:

- Monitoring interaction and progress.
- Keeping the exercise on track.
- Dealing with the unexpected.
- Adjusting the pace as needed. (The flow of messages can be adjusted by adding, deleting, misdirecting, or reassigning messages.)

Designing a Functional Exercise

The full eight-step process is used to develop functional exercises.

The Full-Scale Exercise

Exercise Format

The full-scale exercise combines the interactivity of the functional exercise with a field element and requires the coordination of the efforts of several organizations. It differs from a drill in that a drill focuses on a single operation and exercises only one organization.

The full-scale exercise achieves realism through:

- On-scene actions and decisions.
- Simulated victims.
- Search and rescue requirements.
- Communication devices.
- Equipment deployment.
- Actual resource and personnel allocation.
The Full-Scale Exercise (Continued)

**Participant Roles**

All levels of personnel are involved, including policy makers, coordination and operations personnel, and field personnel. A controller manages the exercise; volunteers simulate victims; evaluators observe and keep a log of significant events; and a safety officer ensures that potential safety issues are addressed.

**Designing a Full-Scale Exercise**

After the first four design steps, the following special considerations apply to the design process:

- The narrative is largely a staged visual scene, so the written narrative can be minimal. The visual narrative must be planned in careful detail.
- Major and minor events are often presented visually and must be carefully planned.
- Expected actions must, as always, be specifically identified.
- Both visual and prescripted messages are used.

In a full-scale exercise, details are everything.

**Site Selection**

The site selected for the event must have adequate space and be as realistic as possible without interfering with normal traffic or safety.

**Scene Management**

Scene management involves planning and handling:

- Logistics at the scene.
- Creation of a believable emergency scene.
- Number of victims.
- Management of props and materials.
- Number of controllers.
The Full-Scale Exercise (Continued)

Other Special Considerations

Other special considerations in a full-scale exercise include:

- Managing personnel and resources (many volunteers, lots of props).
- Ensuring that the emergency management system maintains response capability for routine events.
- Addressing safety issues.
- Attending to issues of legal liability.
- Having a plan for emergency call-off.
- Working with the media.

Exercise Evaluation

For an exercise to be useful, it must be accompanied by an evaluation—less formal for the tabletop, structured for the function and full-scale. Good evaluations can help the organization identify:

- Whether the exercise has achieved its objectives.
- Needed improvements in plans, procedures, or guidelines or the emergency management system as a whole.
- Training and staffing deficiencies.
- Equipment needs.
- Need for additional exercising.

The evaluation team leader—usually drawn from the design team—is responsible for evaluation methodology, selection and training of the evaluation team, and report preparation.
Exercise Evaluation (Continued)

**Methodology**

The evaluation methodology includes:

- Evaluation team structure.
- Objectives to be measured.
- Evaluation packet (i.e., observation procedures and recording forms).

**Postexercise Meetings**

Postexercise meetings include the player debriefing and meetings of the evaluation team to analyze the results and develop the after action report.

**After Action Report**

The After Action Report should describe the purpose of the exercise and address goals, objectives, pre exercise activities, participants, scenario, accomplishments and shortfalls, and recommendations.

**Exercise Enhancements**

Exercise enhancements are used to add to the realism of the exercise. Depending on the type of exercise and available resources, enhancements may include:

- Communications Equipment.
- Visuals.
- Other Equipment and Materials.
- People and Props.
- Resources.
Next Steps

You have now completed IS139 and should be ready to take the Final Exam.

To submit the final exam online, go to http://training.fema.gov and click on FEMA Independent Study. Follow the links to the specific course. Click on the title of this course, and then click on the final exam link. Enter all requested information and click submit.

To submit the final exam by mail using the standard Opscan Answer sheet form, go to http://training.fema.gov, click on FEMA Independent Study and go to Opscan Request. Enter all requested information and click submit. Follow the instructions on the form and mail it to:

FEMA Independent Study Program
16825 South Seton Avenue
Emmitsburg, MD 21727
Appendix A: Job Aids
Job Aid 1: Exercise Needs Assessment

Use this tool to analyze where you may wish to focus your organization’s exercise design efforts. In completing this needs assessment, you may wish to consult such resources as planning documents, demographic or corporate data, maps, and training records.

1. Hazards

List the various hazards in your community or organization. What risks are you most likely to face? You can use the following checklist as a starting point. Note: If your community has already conducted a hazard analysis, that is the best resource.

- Airplane crash
- Dam failure
- Drought
- Epidemic (biological attack)
- Earthquake
- Fire/Firestorm
- Flood
- Hazardous material spill/release
- Hostage/Shooting
- Hurricane
- Landslide/Mudslide
- Mass Fatality Incident
- Radiological Release
- Sustained power failure
- Terrorism
- Tornado
- Train derailment
- Tsunami
- Volcanic eruption
- Wildfire
- Winter storm
- Workplace Violence
- Other ______________________
- Other ______________________
- Other ______________________
- Other ______________________
2. Secondary Hazards

What secondary effects from those hazards are likely to impact your organization?

- Communication system breakdown
- Power outages
- Transportation blockages
- Business interruptions
- Mass evacuations/displaced population
- Overwhelmed medical/mortuary services
- Other ________________________
- Other ________________________
- Other ________________________
- Other ________________________
- Other ________________________

3. Hazard Priority

What are the highest priority hazards? Consider such factors as:

- Frequency of occurrence
- Relative likelihood of occurrence
- Magnitude and intensity
- Location (affecting critical areas or infrastructure)
- Spatial extent
- Speed of onset and availability of warning
- Potential severity of consequences to people, critical facilities, community functions, and property
- Potential cascading events (e.g., damage to chemical processing plant, dam failure)

#1 Priority hazard:

#2 Priority hazard:

#3 Priority hazard:
Job Aid 1: Exercise Needs Assessment (Continued)

4. Area

What geographic area(s) or facility location(s) is(are) most vulnerable to the high priority hazards?

5. Plans and Procedures

What plans and procedures—emergency response plan, contingency plan, operational plan, standard operating procedures (SOPs)—will guide your organization’s response to an emergency?

6. Functions

What emergency management functions are most in need of rehearsal? (e.g., What functions have not been exercised recently? Where have difficulties occurred in the past?) You can use the following checklist as a starting point.

☐ Alert Notification (Emergency Response)
☐ Public Safety
☐ Warning (Public)
☐ Public Works/Engineering
☐ Communications
☐ Transportation
☐ Coordination and Control
☐ Resource Management
☐ Emergency Public Information
☐ Continuity of Government or Operations
☐ Damage Assessment
☐ Other __________________________
☐ Health and Medical
☐ Other __________________________
☐ Individual/Family Assistance
☐ Other __________________________
Job Aid 1: Exercise Needs Assessment (Continued)

7. Participants

Who (agencies, departments, operational units, personnel) needs to participate in an exercise? For example:

- Have any entities updated their plans and procedures?
- Have any changed policies or staff?
- Who is designated for emergency management responsibility in your plans and procedures?
- With whom does your organization need to coordinate in an emergency?
- What do your regulatory requirements call for?
- What personnel can you reasonably expect to devote to developing an exercise?

8. Program Areas

Mark the status of your emergency program in these and other areas to identify those most in need of exercising.

<table>
<thead>
<tr>
<th>Area</th>
<th>New</th>
<th>Updated</th>
<th>Exercised</th>
<th>Used in Emergency</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Annex(es)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Operating Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maps, Displays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting Requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notification Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutual Aid Pacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy-Making Officials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinating Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer Organizations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOC/Command Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Emergency Preparedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Emergency Preparedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damage Assessment Techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 1: Exercise Needs Assessment (Continued)

9. Past Exercises

If your organization has participated in exercises before, what did you learn from them, and what do the results indicate about future exercise needs? For example, consider the following questions:

- Who participated in the exercise, and who did not?
- To what extent were the exercise objectives achieved?
- What lessons were learned?
- What problems were revealed, and what is needed to resolve them?
- What improvements were made following past exercises, and have they been tested?
Job Aid 2: Comprehensive Exercise Program Planning Worksheet

Timeframe:

Present Problems:

Long-Range Goal:

Functional Objectives:

<table>
<thead>
<tr>
<th>Month</th>
<th>Exercise</th>
<th>For</th>
<th>Purpose</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Job Aid 2: Comprehensive Exercise Program Planning Worksheet (Continued)

<table>
<thead>
<tr>
<th>Month:</th>
<th>Exercise:</th>
<th>For:</th>
<th>Purpose:</th>
<th>Rationale:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month:</th>
<th>Exercise:</th>
<th>For:</th>
<th>Purpose:</th>
<th>Rationale:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month:</th>
<th>Exercise:</th>
<th>For:</th>
<th>Purpose:</th>
<th>Rationale:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month:</th>
<th>Exercise:</th>
<th>For:</th>
<th>Purpose:</th>
<th>Rationale:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Job Aid 2: Comprehensive Exercise Program Planning Worksheet (Continued)

<table>
<thead>
<tr>
<th>Month:</th>
<th>Exercise:</th>
<th>For:</th>
<th>Purpose:</th>
<th>Rationale:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 3: Self-Assessment: Resources and Costs

1. **Plans**
   How familiar are you with the emergency plans, policies, and procedures of your organization or jurisdiction?

   - [ ] Very familiar
   - [ ] Only general familiarity
   - [ ] Familiar with only a portion
   - [ ] Need to thoroughly review plans, policies, and procedures

2. **Time**
   a. How far in advance would your organization realistically have to schedule to plan and design each of the following exercise activities effectively?

      - Orientation  ________________________________
      - Drill  ________________________________
      - Tabletop exercise  ________________________________
      - Functional exercise  ________________________________
      - Full-scale exercise  ________________________________

   b. How much preparation time can reasonably be allocated to developing an exercise?

      - Actual person days:

      - Elapsed time to exercise:
APPENDIX A: JOB AIDS

Job Aid 3: Self-Assessment: Resources and Costs (Continued)

3. Experience

a. When was your organization's last exercise?

b. What is your previous experience with exercises? (Check all that apply.)

- Orientation: □ Presenter □ Participant
- Drill: □ Controller □ Participant
- Tabletop exercise: □ Facilitator □ Participant
- Functional exercise: □ Controller □ Simulator □ Player □ Evaluator
- Full-scale exercise: □ Controller □ Responder □ Evaluator □ Victim

□ Took part in postexercise debrief.
□ Helped write an evaluation report.

c. What other exercise-related experience is available in your organization?

4. Facilities

What physical facilities do you use when conducting an emergency operation?

Will they be required for this exercise?  Yes □  No □
Will they be available for this exercise? Yes □ No □
Job Aid 3: Self-Assessment: Resources and Costs (Continued)

5. **Communications:** What communication facilities and systems do you use in a real emergency?

   Will they be required for this exercise?  Yes ☐  No ☐

   Will they be available for this exercise?  Yes ☐  No ☐

6. **Barriers:** Are there any resource barriers that need to be overcome to carry out this exercise?  Yes ☐  No ☐

   If so, what are the barriers and how can they be overcome?
Job Aid 3: Self-Assessment: Resources and Costs (Continued)

7. Costs

a. What types of costs might be incurred for these exercises in your organization? (Do not list exact figures—just types of expenses, such as wages and salaries, transportation, etc.)

For an orientation:

For a drill:

For a tabletop exercise:

For a functional exercise:

For a full-scale exercise:

b. Are there ways that different organizations can reduce costs (e.g., by combining exercises, cost-sharing, resource-sharing) and still fulfill program requirements? Explain.
# Job Aid 4: Exercise Development Checklist

## Mission
- Needs Assessment
- Scope
- Statement of Purpose
- Objectives

## Scenario
- Narrative
- Major/Detailed Events
- Expected Actions
- Messages

## Personnel
- Design Team
- Controller or Facilitator
- Players
- Simulators
- Evaluators
- Management
  - Safety
  - Observers

## Logistics
- Safety
- Scheduling
- Rooms/Location
- Equipment
- Communications
  - Phones
  - Radio
  - Computers
- Enhancements
  - Maps
  - Charts
  - Other:

## Information
- Directives
- Media
- Public Announcements
- Invitations
- Community Support
- Management Support
- Timeline Requirements

## Training/Briefings
- Train Simulators, Evaluators, Controllers
- Players’ Preexercise Briefing

## Evaluation
- Methodology
- Locations
- Evaluation Forms
- Postexercise Debrief

## After Action Documentation/Recommendations
- Evaluation Meeting
- Evaluation Report
- Followup Ideas for Next Exercise
# Job Aid 5: Activities Schedule

<table>
<thead>
<tr>
<th>Deadline for Completion</th>
<th>Leader Activities</th>
<th>Team Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Job Aid 6: Design Team Worksheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency Represented</th>
<th>Contributions/Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 7: Scope Worksheet

1. Highest priority hazards (major and secondary):

2. Geographic areas/locations of greatest vulnerability to these hazards:

3. Agencies/departments/organizational units: List below the entities that have a significant role in emergency management/response. Then, enter check marks in any columns that apply.

<table>
<thead>
<tr>
<th>Agency/Organization</th>
<th>Limited experience with major emergencies</th>
<th>New plans, staff, or organizational structure not yet exercised</th>
<th>Problems revealed in prior exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Types/levels of personnel that you want to have in the exercise:

☐ Policy making (elected officials, chief operating officers, department heads)
☐ Coordination (managers, EOC representatives, department deputies)
☐ Operations (field personnel, headquarters staff level)
☐ Public representatives (media, PIOs, general public)
☐ Other: __________________________________________________________
Job Aid 7: Scope Worksheet (Continued)

5. Types of operations/functions that you want participants to engage in (e.g., notification, evacuation):

6. Degree of stress, complexity, time pressure that the exercise should have:

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 7: Scope Worksheet (Continued)

<table>
<thead>
<tr>
<th>Exercise:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope:</td>
</tr>
<tr>
<td>Type of Emergency:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
<tr>
<td>Functions:</td>
</tr>
<tr>
<td>Organizations and Personnel:</td>
</tr>
<tr>
<td>Exercise Type:</td>
</tr>
</tbody>
</table>
Job Aid 8: Statement of Purpose (Form 1)

The purpose of the proposed emergency management exercise is to improve the following emergency *operations*:

a. 

b. 

c. 

d. 

by involving the following *agencies/organizations/departments*:

a. 

b. 

c. 

d. 

e. 

f. 

g. 

h. 

in a ______________________ exercise simulating a ____________________

[type of exercise]  [type of emergency event]

at _____________________________ on ____________________.

[location]  [date]
Job Aid 8: Statement of Purpose (Form 2)

The purpose the proposed emergency management exercise is to:

- Coordinate the activities of city and county government, volunteer organizations, and private industry in their response to a major incident;

- To provide training to staff;

- To test and evaluate the ____________________________ Annexes;

- To enhance interagency coordination and cooperation by involving the following department or agency heads:

<table>
<thead>
<tr>
<th>Department/Agency</th>
<th>Head/Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These entities will be tested on ____________________________ in a simulated exercise involving a __________ at ____________________________

[type of incident]          [location]
Job Aid 9: Objectives

List the exercise objectives below. **Include the observable action, responsible party, conditions, and standards. Be sure each objective is SMART:**

- Simple
- Measurable
- Achievable
- Realistic
- Task Oriented

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Objective</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Job Aid 9: Objectives (Continued)

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Objective</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 9: Objectives (Continued)

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Objective</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 10: Narrative Outline

<table>
<thead>
<tr>
<th>Event:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How fast, strong, deep, dangerous:</td>
</tr>
<tr>
<td>How you found out:</td>
</tr>
<tr>
<td>Response made:</td>
</tr>
<tr>
<td>Damage reported:</td>
</tr>
<tr>
<td>Sequence of events:</td>
</tr>
<tr>
<td>Current time:</td>
</tr>
<tr>
<td>Advance warning:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
<tr>
<td>Relevant weather conditions:</td>
</tr>
<tr>
<td>Other factors that would influence emergency procedures:</td>
</tr>
<tr>
<td>Predictions:</td>
</tr>
</tbody>
</table>
## Job Aid 11: Events and Actions Planning Sheet

<table>
<thead>
<tr>
<th>Obj. No.</th>
<th>Major Events</th>
<th>Detailed Events</th>
<th>Organizations</th>
<th>Expected Actions</th>
<th>Actual Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Job Aid 12: Message Planning Sheet

<table>
<thead>
<tr>
<th>Detailed Events</th>
<th>Expected Actions</th>
<th>Organizations</th>
<th>Message Outline</th>
<th>Message Planning Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 13: Emergency Exercise

EMERGENCY EXERCISE

<Message>

TO: ___________________________ METHOD: ___________________________
FROM: _______________________

NO: ___________________________ TIME: ___________________________

CONTENT: ___________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

ACTION TAKEN: ______________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
### Job Aid 14: Sample Master Scenario Events List

<table>
<thead>
<tr>
<th>Sample Master Scenario Events List</th>
<th>Time</th>
<th>Message/Event</th>
<th>Expected Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Job Aid 15: Tabletop Exercise Checklist

### Design
- Needs assessment, scope, statement of purpose, and objectives developed.
- **Narrative:**
  - May be shorter
  - Presented all at once or incrementally
- **Events:**
  - Limited number
  - Presented as problem statements
- **Expected actions:**
  - May involve identification of appropriate responses, identification of gaps in procedures, reaching group consensus, developing ideas for change, etc.
- **Messages:**
  - Limited number (e.g., 10-15)
  - Involve everyone
  - Tied to objectives

### Facilitation
- **Welcome participants**
- **Briefing:**
  - Purpose and objectives
  - Ground rules and procedures
- **Narrative presentation (printed, verbal, TV, radio)**
- **Ice breaker questions directed at high-ranking officers**
- **Messages organized to involve all organizations**
- **Strategies to encourage the reticent**
- **Facilitate—don’t dominate**
- **Model positive behaviors (eye contact, positive reinforcement)**
- **Aim for in-depth problem solving**
- **Strategies for sustaining action**
  - Multiple event stages
  - Varied pace
  - Balanced pace
  - Conflict resolution
  - Low-key atmosphere
## Job Aid 16: Functional Exercise Message Flow Planning

### Participating Agency/Organization

(List organizations above the columns below. Check the times when messages are scheduled for delivery to each organization.)

<table>
<thead>
<tr>
<th>(Enter Msg. Times Below)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Aid 17: Functional Exercise Design Checklist: Special Considerations

Facilities and Equipment
- Sufficient work space for simulators and players
- Simulation room (if needed) near player room
- Space for message center, control center, observers (as needed)
- Clear work surfaces
- Communication equipment (telephones, switchboard)
- Parking
- Adequate ventilation and lighting
- Restrooms

Displays and Materials
- Displays easily visible or accessible
- Maps (regional, state, local, area, downtown, operational units)
- Major events log, bulletin board, status boards, simulation plotting board
- Easels, chart paper
- Message forms
- Pencils/Paper
- Name cards

Beginning:
- “No-notice” or scheduled (according to objectives)

Briefing (short):
- Objectives
- Process
- Time period portrayed
- Ground rules and procedures

Narrative:
- Verbal, print, TV, computer, slides, or dramatization
- Time-skips if needed

Messages:
- Large number (depends on scope)
- Pre-scripted
- Optional prescripted for adjusting flow

Message Delivery:
- Written
- Phone
- Other (verbal, speaker phone/radio, hand signals)
- Simulators prepared for spontaneous message development
- Standardized forms for written messages

Strategies for Adjusting Pace:
- Rescheduling
- Adding/Deleting messages
- Misdirecting messages
- Reassigning messages
Job Aid 18: Full-Scale Exercise Planning Checklist: Special Considerations

Participants:
- Controller(s)—sufficient to manage all event sites
- Simulators (mock victims)—different age groups, body types, physical characteristics
- Players (most functions, all levels—policy, coordination, operation, field)
- Evaluators
- Safety Officer

Site Selection:
- Adequate space for number of victims, responders, and observers
- Space for vehicles and equipment
- As realistic as possible without interfering with normal traffic or safety
- Credible scenario and location

Scene Management:
- Logistics (who, what, where, how, when)
- Believable simulation of emergency
- Realistic victims
- Preparation of simulators to portray roles realistically
- Number of victims consistent with type of emergency, history of past events
- Types of injuries consistent with type of emergency, history of past events
- Victim load compatible with local capacity to handle
- Props and materials to simulate injuries, damage, other effects

Personnel and Resources:
- Number of participants
- Number of volunteers for scene setup, victims, etc.
- Types and numbers of equipment
- Communications equipment
- Fuel for vehicles and equipment
- Materials and supplies
- Expenses identified (wages, overtime, fuel, materials and supplies)

Response Capability
- Sufficient personnel kept in reserve to handle routine non-exercise events

Safety
- Safety addressed through development
- Each design team member responsible for safety in own discipline
- Hazards identified and resolved
- Safety addressed in preexercise briefing, simulator and evaluator packets
- Each field location examined for safety issues
- Safety officer designated, given authority

Legal Liability
- Legal questions of liability researched by local attorney

Emergency Call-Off
- Call-off procedure in place, including code word/phrase
- Call-off procedure tested

Media
- Role of media addressed in planning, used as a resource to gain favorable exposure
- Media and observers considered in logistical planning
## Job Aid 19: Observation Checklist

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Decision to Look For</th>
<th>Players to Observe</th>
<th>Where</th>
<th>Expected Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Job Aid 20: Evaluator Checklist

Evaluator: __________________________   Date: _______________
Location: ___________________________

<table>
<thead>
<tr>
<th>Objective No.:</th>
<th>Function Being Evaluated:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Objective:

**Performance Criterion [##]**

**Points of Review:**
Please answer the following:  Y = Yes,  N = No,  NA = Not Applicable,  NO = Not Observed

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>N</th>
<th>NA</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Job Aid 21: Narrative Summary

| Objective Number: __________________ | Criterion Number: ____________ |
| Evaluator: ________________________ | Location: _________________ |

**Issue:**
A specific statement of the problem, plan, or procedure that was observed.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

**Discussion:**
A discussion of the issue and its specific impact on operational capability.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

**Corrective Action Recommendation:**
Recommended course(s) of action to improve performance or resolve the issue to improve operational capability.

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
Job Aid 21: Narrative Summary (Continued)

**Office of Primary Responsibility:**
The department, agency, or organization responsible for implementation of corrective actions.

**Department, Agency, or Organization:**
________________________________________________

**Individual Responsible:**
____________________________________________________________

**Title:** ________________  **Date Assigned:** ___ / ___ / ___  **Suspense Date:** ___ / ___ / ___
## Job Aid 22: Key Event Response Form

<table>
<thead>
<tr>
<th>Response Date/Time</th>
<th>Position Responding</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Job Aid 23: Problem Log

Date: __________________________

Exercise Assignment: ____________________________ Tel. No: ______________________

<table>
<thead>
<tr>
<th>Time</th>
<th>Message Library No. (if known)</th>
<th>Problem</th>
<th>Analysis (Leave Blank)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Job Aid 24: Exercise Debriefing Log

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Problem Summary</th>
<th>Recommended Action</th>
<th>Responsible Agency/Person</th>
<th>Date</th>
<th>Recorder</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Problem Summary</th>
<th>Recommended Action</th>
<th>Responsible Agency/Person</th>
<th>Date</th>
<th>Recorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
<tr>
<td>Exercise</td>
<td>Problem Summary</td>
<td>Recommended Action</td>
<td>Responsible Agency/Person</td>
<td>Date</td>
<td>Recorder</td>
</tr>
</tbody>
</table>
Job Aid 25: Exercise Critique Form

Please take a few minutes to fill out this form. Your opinions and suggestions will help us prepare better exercises in the future.

1. Please rate the overall exercise on the following scale.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
   | Very Poor | Very Good |

2. Compared to previous exercises, this one was:

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
   | Very Poor | Very Good |

3. Did the exercise effectively simulate the emergency environment and emergency response activities? Yes _________ No __________

   If no, briefly explain why:

4. Did the problems presented in the exercise adequately test readiness capability to implement the plan? Yes _________ No __________

   If no, briefly explain why:
Job Aid 25: Exercise Critique Form (Continued)

5. The following problems should be deleted or revised:

6. I suggest that you add the following problems for the next exercise.

7. Please add any other comments or suggestions.
Appendix B: Acronym List
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARES</td>
<td>Amateur Radio Emergency Services</td>
</tr>
<tr>
<td>CB</td>
<td>Citizen’s Band</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Elected Official</td>
</tr>
<tr>
<td>CFR</td>
<td>Crash/Fire Rescue</td>
</tr>
<tr>
<td>CHEMTREC</td>
<td>Chemical Transportation Emergency Center</td>
</tr>
<tr>
<td>DOE</td>
<td>Department of Energy</td>
</tr>
<tr>
<td>EAS</td>
<td>Emergency Alert System</td>
</tr>
<tr>
<td>EMERS</td>
<td>Emergency Management Exercise Reporting System</td>
</tr>
<tr>
<td>EMI</td>
<td>Emergency Management Institute</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>EOC</td>
<td>Emergency Operations Center</td>
</tr>
<tr>
<td>EOP</td>
<td>Emergency Operations Plan</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>IEMC</td>
<td>Integrated Emergency Management Course</td>
</tr>
<tr>
<td>ICS</td>
<td>Incident Command System</td>
</tr>
<tr>
<td>JCAHO</td>
<td>Joint Commission on Accreditation of Healthcare Organizations</td>
</tr>
<tr>
<td>JIC</td>
<td>Joint Information Center</td>
</tr>
<tr>
<td>NAWAS</td>
<td>National Warning System</td>
</tr>
<tr>
<td>NOAA</td>
<td>National Oceanic and Atmospheric Administration</td>
</tr>
<tr>
<td>NRC</td>
<td>Nuclear Regulatory Commission</td>
</tr>
<tr>
<td>NWS</td>
<td>National Weather Service</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PDS</td>
<td>Professional Development Series</td>
</tr>
<tr>
<td>PIO</td>
<td>Public Information Officer</td>
</tr>
<tr>
<td>RACES</td>
<td>Radio Amateur Civil Emergency Services</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendment and Reauthorization Act of 1986</td>
</tr>
<tr>
<td>SOPs</td>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td>USGS</td>
<td>United States Geological Survey</td>
</tr>
<tr>
<td>US&amp;R</td>
<td>Urban Search and Rescue</td>
</tr>
</tbody>
</table>
Appendix C: Exercise Tool Box
For purposes of this *Exercise Design* course, the Exercise Tool Box contains several important items that you can use:

Templates for:

Exercise Plan
Control Plan
Evaluation Plan
Player’s Handbook

And Job Aids for all forms and charts used in the course are also contained in the Tool Box as “Exercise Design Job Aids.”

You can access the Tool Box for the Exercise Design Independent Study IS-139 at [http://training.fema.gov/emiweb/IS/is139lst.asp](http://training.fema.gov/emiweb/IS/is139lst.asp).