
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.

- | | |
|---|--|
| <input type="checkbox"/> Airplane crash | <input type="checkbox"/> Sustained power failure |
| <input type="checkbox"/> Dam failure | <input type="checkbox"/> Terrorism |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Tornado |
| <input type="checkbox"/> Epidemic (biological attack) | <input type="checkbox"/> Train derailment |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Tsunami |
| <input type="checkbox"/> Fire/Firestorm | <input type="checkbox"/> Volcanic eruption |
| <input type="checkbox"/> Flood | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Hazardous material spill/release | <input type="checkbox"/> Winter storm |
| <input type="checkbox"/> Hostage/Shooting | <input type="checkbox"/> Workplace Violence |
| <input type="checkbox"/> Hurricane | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Landslide/Mudslide | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Mass Fatality Incident | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Radiological Release | <input type="checkbox"/> Other _____ |

Job Aid 1: Exercise Needs Assessment (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:

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.

- | | |
|--|---|
| <input type="checkbox"/> Alert Notification (Emergency Response) | <input type="checkbox"/> Public Safety |
| <input type="checkbox"/> Warning (Public) | <input type="checkbox"/> Public Works/Engineering |
| <input type="checkbox"/> Communications | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Coordination and Control | <input type="checkbox"/> Resource Management |
| <input type="checkbox"/> Emergency Public Information | <input type="checkbox"/> Continuity of Government or Operations |
| <input type="checkbox"/> Damage Assessment | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Health and Medical | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Individual/Family Assistance | <input type="checkbox"/> 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.

	New	Updated	Exercised	Used in Emergency	N/A
Emergency Plan					
Plan Annex(es)					
Standard Operating Procedures					
Resource List					
Maps, Displays					
Reporting Requirements					
Notification Procedures					
Mutual Aid Pacts					
Policy-Making Officials					
Coordinating Personnel					
Operations Staff					
Volunteer Organizations					
EOC/Command Center					
Communication Facility					
Warning Systems					
Utility Emergency Preparedness					
Industrial Emergency Preparedness					
Damage Assessment Techniques					
Other:					

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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:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Job Aid 2: Comprehensive Exercise Program Planning Worksheet (Continued)

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Job Aid 2: Comprehensive Exercise Program Planning Worksheet (Continued)

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

Month:

Exercise:

For:

Purpose:

Rationale:

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:

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

Personnel

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

Information

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

Training/Briefings

- Train Simulators, Evaluators,
 - Controllers
- Players' Preexercise Briefing

Scenario

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

Logistics

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

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

Deadline for Completion	Leader Activities	Team Activities

Job Aid 6: Design Team Worksheet

Name	Agency Represented	Contributions/Qualifications
Leader		
Members		

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:

	High	Medium	Low
Stress	_____	_____	_____
Complexity	_____	_____	_____
Time pressure	_____	_____	_____

Job Aid 7: Scope Worksheet (Continued)

Exercise:
Scope:
Type of Emergency:
Location:
Functions:
Organizations and Personnel:
Exercise Type:

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. _____

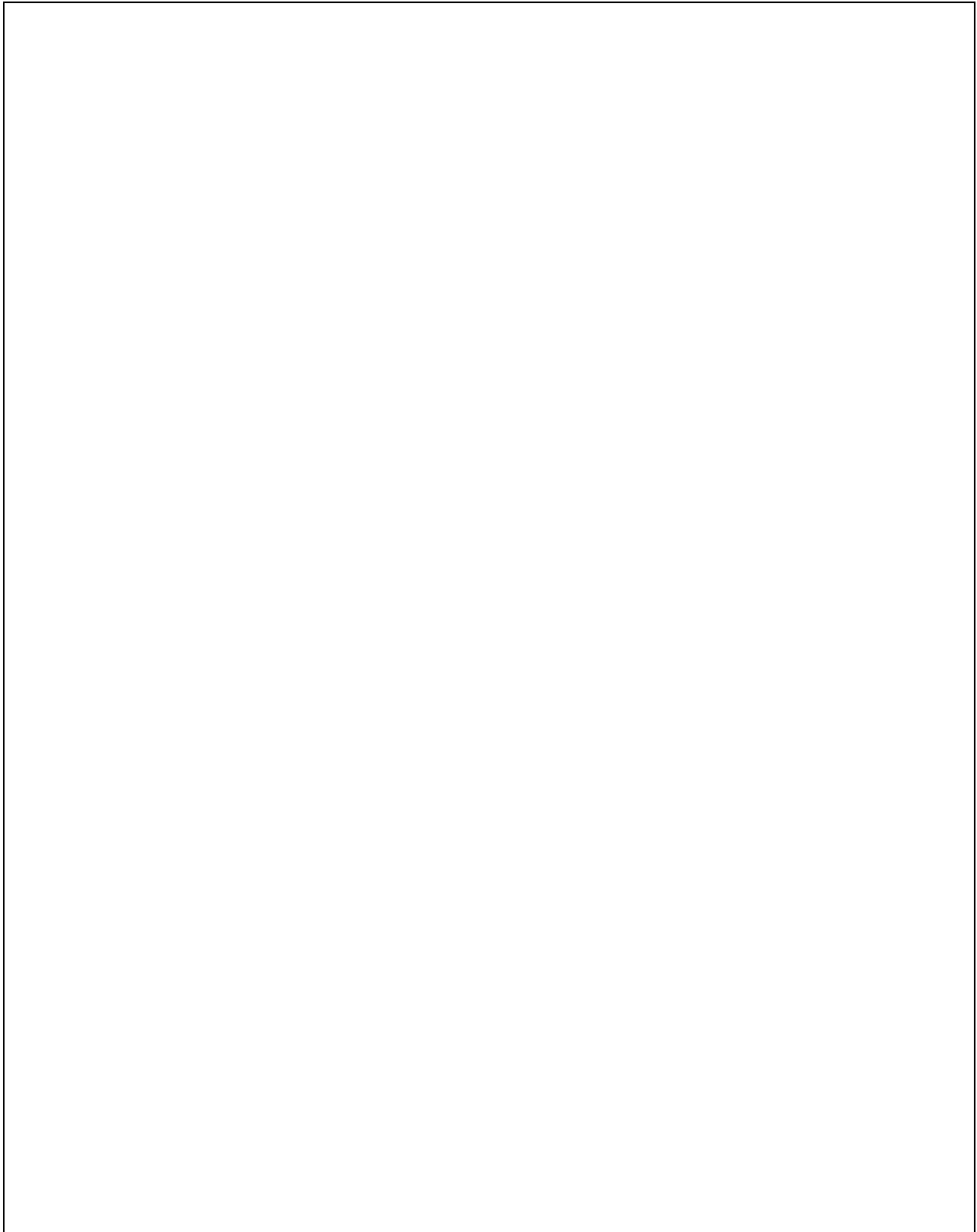
in a _____ exercise simulating a _____
[type of exercise] *[type of emergency event]*

at _____ on _____.
[location] *[date]*

Job Aid 10: Narrative Outline

Event:
How fast, strong, deep, dangerous:
How you found out:
Response made:
Damage reported:
Sequence of events:
Current time:
Advance warning:
Location:
Relevant weather conditions:
Other factors that would influence emergency procedures:
Predictions:

Job Aid 10: Narrative Script

A large, empty rectangular box with a thin black border, occupying most of the page. It is intended for the user to write a narrative script.

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Job Aid 13: Emergency Exercise

EMERGENCY EXERCISE
<MESSAGE>

TO:	METHOD	FROM:
NO:	TIME:	

CONTENT: _____

ACTION TAKEN: _____

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 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 prescribed 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 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 24: Exercise Debriefing Log

Exercise Debriefing Log			
Exercise _____	Recorder _____	Date _____	
Problem Summary	Recommended Action	Responsible Agency/Person	

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 _____

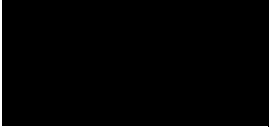
If no, briefly explain why:

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.

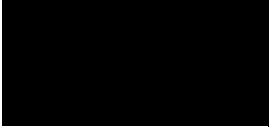


Appendix B: Acronym List

APPENDIX B

ACRONYM LIST

ARES	Amateur Radio Emergency Services
CB	Citizen's Band
CEO	Chief Elected Official
CFR	Crash/Fire Rescue
CHEMTREC	Chemical Transportation Emergency Center
DOE	Department of Energy
EAS	Emergency Alert System
EMERS	Emergency Management Exercise Reporting System
EMI	Emergency Management Institute
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
IEMC	Integrated Emergency Management Course
ICS	Incident Command System
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JIC	Joint Information Center
NAWAS	National Warning System
NOAA	National Oceanic and Atmospheric Administration
NRC	Nuclear Regulatory Commission
NWS	National Weather Service
OSHA	Occupational Safety and Health Administration
PDS	Professional Development Series
PIO	Public Information Officer
RACES	Radio Amateur Civil Emergency Services
SARA	Superfund Amendment and Reauthorization Act of 1986
SOPs	Standard Operating Procedures
USGS	United States Geological Survey
US&R	Urban Search and Rescue



**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>.

1. Research has shown that:
 - a. Exercises are the best way to teach employees new skills.
 - b. Extended lectures are an effective alternative to exercises.
 - c. When possible, it is more effective to use real (rather than simulated) emergencies to test response procedures.
 - d. People usually respond to an emergency in the way they have trained.

2. Which of the following is **not** a good reason to exercise?
 - a. To reveal planning weaknesses and gaps in resources.
 - b. To clarify roles and responsibilities.
 - c. To reduce the need for organizational coordination and communication.
 - d. To satisfy regulatory requirements.

3. In a progressive exercise program, the exercises:
 - a. Have a consistent format but are conducted with increasing frequency.
 - b. Are organized to increase in complexity.
 - c. Are organized to decrease in complexity.
 - d. Are sponsored on a rotating basis by different organizations.

4. Availability of resources:
 - a. Is irrelevant to the exercise process.
 - b. Should not affect exercise design.
 - c. Should be considered in scheduling and planning an exercise.
 - d. Is seldom an issue for exercise design because exercises require few resources.

5. The major task accomplishments in the exercise process are:
 - a. Establishing the base, exercise development, exercise conduct, critique and evaluation, and followup.
 - b. Conducting tabletop, functional, and full-scale exercises.
 - c. Developing, conducting, and evaluating the exercise.
 - d. Conducting a needs assessment, writing objectives, and evaluating whether the objectives were achieved.

6. The exercise design team leader should be:
 - a. The Emergency Manager.
 - b. Someone who is familiar with the emergency plan.
 - c. A key operational member of a participating organization.
 - d. The chief official of the jurisdiction or organization.

7. Which statement is true of an orientation?
 - a. It requires field sites and actual equipment.
 - b. It may be used to introduce or explain plans and policies.
 - c. It involves a controller, simulators, and evaluators.
 - d. It is used to test a specific operation.

8. Which statement is true of a drill?
 - a. It is best conducted in a conference room.
 - b. It involves a controller, simulators, and evaluators.
 - c. It is used to test a specific operation.
 - d. It is aimed primarily at policy makers and decision makers.

9. Which statement is true of a tabletop exercise?
 - a. It involves a highly realistic simulation.
 - b. It involves a controller, simulators, and evaluators.
 - c. It requires field sites and actual equipment deployment.
 - d. It is a facilitated analysis of an emergency situation.

10. Which statement is true of a functional exercise?
 - a. It involves a controller, simulators, and evaluators.
 - b. It is simple, informal, and stress-free.
 - c. It requires field sites and actual equipment deployment.
 - d. It may be used to introduce or explain plans and policies.

11. Which statement is true of a full-scale exercise?
 - a. It is aimed primarily at policy makers and decision makers.
 - b. It requires field sites but actual equipment remains in the shed.
 - c. It is used to test a specific operation.
 - d. It involves a highly realistic simulation.

12. The narrative:

- a. Sets the stage for later action.
- b. Lists all of the events that will occur in the exercise.
- c. Provides the master list of events and expected actions.
- d. Explains the objectives of the exercise.

13. The scope:

- a. Sets the mood for the exercise.
- b. Establishes the limits of the exercise.
- c. States the objectives of the exercise.
- d. Lists the financial and human resources required to run the exercise.

14. An example of a good exercise objective is:

- a. A sufficient number of accurate messages will be transmitted by the dispatch center to the communications center and primary response organizations in a timely and efficient manner.
- b. At the time the evacuation notice is received, the EOC policy and coordination groups will examine the needs of schools and other special facilities and organize notification according to SOPs.
- c. Proper procedures will be followed to declare a disaster or ask for outside aid.
- d. Interaction with other jurisdictions will be demonstrated.

15. A _____ is a useful tool to help the controller keep the exercise on track and on schedule.

- a. Message form
- b. Narrative
- c. Master scenario of events list
- d. Exercise directive

16. A convincing, unified scenario requires:

- a. 10 major events and approximately 100 detailed events.
- b. Messages written in a way will not allow unexpected responses to occur.
- c. The players know the events in advance.
- d. Careful scripting of events.

17. In a tabletop exercise, an important part of the facilitator's job is to:
- Maintain an even pace and consistent approach.
 - Adhere to a highly structured agenda.
 - Sustain action and keep everyone involved.
 - Make sure the entire set of problem statements is discussed.
18. Which of the following is **not** true of a simulator in a functional exercise:
- May deliver written messages.
 - Is often called upon to rate the performance of key players.
 - May deliver messages verbally.
 - Sometimes needs to make up a response to a player.
19. An exercise that tested only notification procedures in response to a terrorist bombing would be:
- A drill.
 - A tabletop exercise.
 - A functional exercise.
 - A full-scale exercise.
20. _____ is a good use of a full-scale exercise:
- Trying out a new and untested emergency plan
 - Training personnel in negotiation
 - Practicing group problem solving in a nonthreatening environment
 - Testing emergency procedures and coordination of multiple agencies or organizations
21. A full-scale exercise involves:
- All levels of personnel, including response personnel.
 - Primarily the key policy and decision makers.
 - Policy, coordination, and operations personnel.
 - The staff from one department or unit.
22. A good evaluation can help the organization identify:
- Training and staffing deficiencies.
 - Qualified members of the evaluation team.
 - Exercise objectives.
 - The scope of the exercise.

23. During the exercise, evaluators should:

- a. Ensure that players are aware when they are being observed.
- b. Offer suggestions that can improve the exercise results.
- c. Focus on the positive.
- d. Avoid attracting players' attention.

24. 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.

25. 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.