

**Instructor Guide to Unit Six:
Light Search and Rescue**

1. The goal of this unit is to focus on the components of an effective search and rescue operation—size-up, search, and rescue—and the methods and techniques that rescuers can use to locate and safely remove victims.

2. This is the content for Unit Six:

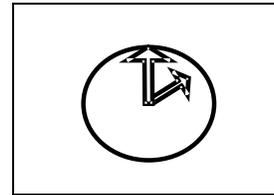
- a. Search and rescue size-up
- b. Exercise: gathering facts
- c. Exercise: search and rescue size-up
- d. Conducting search operations
- e. Conducting rescue operations
- f. Exercise: removing victims

3. Supplies needed for Unit Six:

- LCD projector
- Computer linked to LCD projector
- Computer disk containing Unit Six power point presentation
- Instructor Guide for Unit Six
- Participant's Manual for CERT

4. Instructional staffing requirements:

One instructor is required for this unit. Team teaching is encouraged.



5. Unit Six is scheduled for one-and-one-half hours.

This is the suggested time-line:

- a. 10 minutes
- b. 10 minutes
- c. 15 minutes
- d. 20 minutes
- e. 20 minutes
- f. 15 minutes

90 minutes

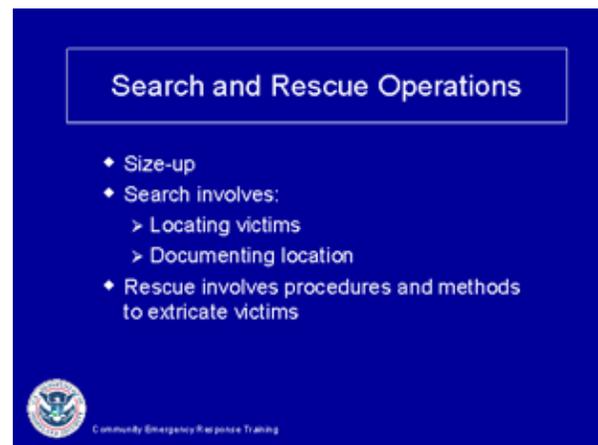
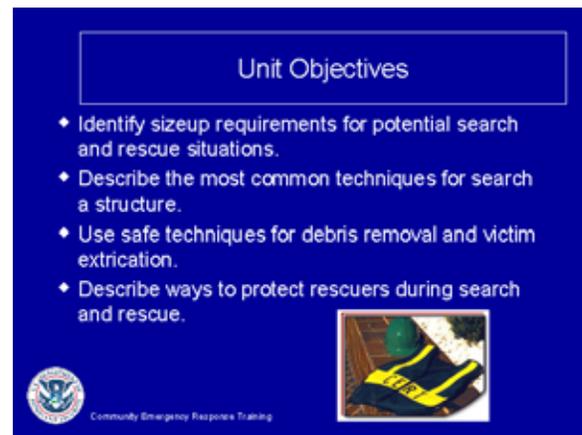
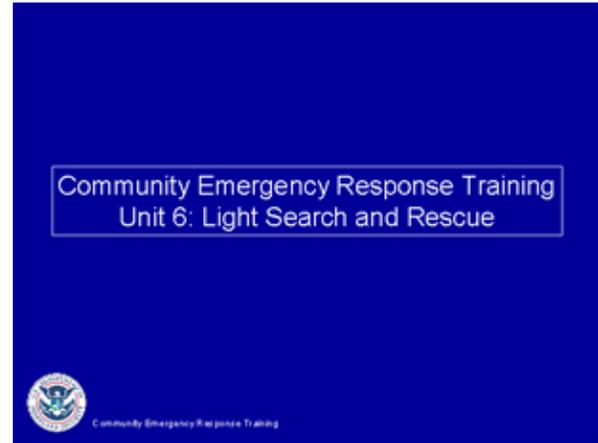


The clock is found throughout the instructor guide it indicates how many minutes it is suggested be spent on each subject area.

Time spent on each unit can be maneuvered by dropping content and referring to its placement in the take-home materials. This permits flexibility on the part of the instructor and encourages participants to question or discuss course matters. It also holds the instructor to the time limit for the unit without expecting participants to stay overtime or to have instructors who follow to give up their time.



Experience from previous disasters has shown that immediately after almost every disaster, the first response to trapped victims is by spontaneous, untrained, and well-intentioned persons who rush to the site of a collapse in an attempt to free the victims. More often than not, these spontaneous rescue efforts result in serious injuries and compounded problems. However well-meaning, rescue efforts should be planned and practiced in advance.





Search and rescue requires size-up at the beginning of the operation and repeatedly as long as the operation continues. Size-up is a 9-step process that was presented in Unit 2. This section will focus on size-up as it relates to search and rescue operations.

Can a search and rescue be safely attempted by CERT members?

- a. If yes, proceed with the checklist.
- b. If no, do not attempt a search and rescue.
- c. Are there other, more pressing needs at the moment?
If yes, list.

There are check lists in this unit for participants to use as they decide to search and rescue.

Decision To Attempt Rescue

- ◆ Risk involved to the rescuer
- ◆ Greatest good for greatest number of people




Community Emergency Response Training

Goals of Search and Rescue

- ◆ Rescue greatest number in the shortest amount of time
- ◆ Rescue lightly trapped victims first




Community Emergency Response Training

Effective Search and Rescue

- ◆ Effective sizeup
- ◆ Rescuer safety
- ◆ Victims safety




Community Emergency Response Training

Gather Facts

The time of the event and day of the week. At night, more people will be in their homes, so the greatest need for search and rescue will be in residential settings. Conversely, during the day, people will be at work, so the need will be in commercial buildings.

2. Some emergency services are not available—or not available in the same numbers—during the evenings or on weekends. Search and rescue operations may also be affected by where people are located in their homes and the amount of daylight available.

3. The type of structure. The design of the structure may indicate the likely number of victims and their locations.

4. Construction type. Some types of construction are more susceptible to damage than others.

5. Weather. Severe weather will have an effect on victims and rescuers and will hamper rescue efforts. Forecasts of severe weather will be a limiting factor on search and rescue efforts.

6. Hazards. Knowledge of other potential hazards in the general and immediate areas is important to search and rescue efforts. Time lost trying to locate and shut off utilities, for example, can have a big impact in terms of loss of life.

CERT Search and Rescue Sizeup

<ol style="list-style-type: none"> 1. Gather Facts 2. Assess Damage 3. Consider Probabilities 4. Assess Your Situation 5. Establish Priorities 	<ol style="list-style-type: none"> 6. Make Decisions 7. Develop Plans of Action 8. Take Action 9. Evaluate Progress
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Community Emergency Response Training

Step 1: Gather Facts

Consider the:

- ◆ Time of event and day of week.
- ◆ Type of structure.
- ◆ Construction type.
 - ◆ Weather.
 - ◆ Hazards.

Gather facts accurately!



Community Emergency Response Training

**Step 2:
Assess and Communicate Damage**

The CERT mission changes if:

- ◆ Damage is light.
- ◆ Damage is moderate.
- ◆ Damage is heavy.

Consider structure type and age.
Never enter a structure with heavy damage!

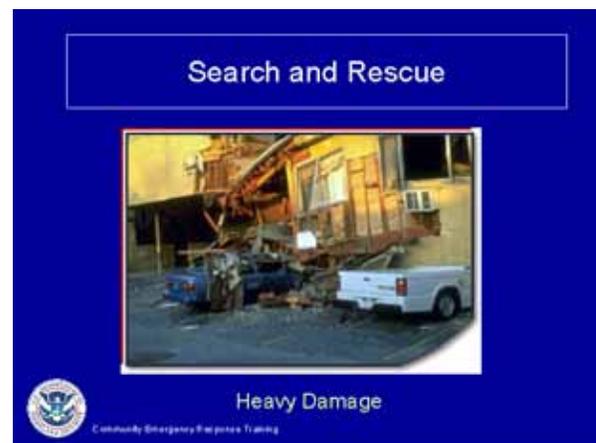
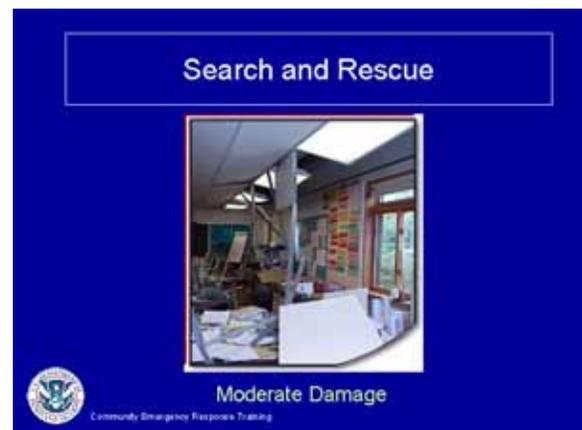


Community Emergency Response Training

.Exercise: Gathering Facts

1. Purpose: This exercise is an interactive activity to give you the opportunity to consider some of the facts that CERT search and rescue teams will need to gather during size-up.
2. Instructions: Read Scenario 5-1 on the following page. Brainstorm the six questions that follow the scenario.

Step 2: Assess and Communicate Damage – There are general guidelines for assessing damage. When in doubt about the condition of a building, always use the more restrictive assessment. For example, if you are unsure about whether a building is moderately or heavily damaged, assume heavy damage. The CERT mission changes depending on the amount of structural damage



Step 3: Consider Probabilities – Because CERT members will be working in such close proximity to the dangerous situation, considering what will probably happen and what could happen are of critical importance. Identify potentially life-threatening hazards.

Step 4: Assess Your Situation – Size-up is a building process, with each step building upon the previous steps until the decision is made to begin the search and rescue operation (or that the situation is unsafe). Assessing resources is extremely important to search and rescue operations. Draw on everything you've learned from steps 1 through 3 to assess your situation to determine:

- a. Whether the situation is safe enough to continue.
- b. The risks that rescuers will face if they continue.
- c. What resources will be needed to conduct the operation safely (and what resources are available).

Step 5: Establish Priorities – After evaluating the situation, the next step is to determine what should be done and in what order.

- 1. The safety of CERT members is always the first priority and will dictate some of your other priorities.

Search and Rescue sizeup

- ◆ Personnel
- ◆ Tools
- ◆ Equipment




Community Emergency Response Training

Safety Considerations

- ◆ Make rescuer safety your primary concern.
- ◆ Use a buddy system.
- ◆ Be alert for hazards.
- ◆ Use safety equipment.
- ◆ Rotate teams.

Teamwork=Success



Community Emergency Response Training

Conducting Search Operations

Inspect area by:

1. Employing search techniques based on size-up.
2. Locating potential victims.




Community Emergency Response Training

Exercise: Search and Rescue Size-up

1. Purpose: This exercise is an interactive activity to give you an opportunity to practice some of the thinking processes involved in planning and search and rescue size-up.

a. The brainstorming required will help you to begin to assess your neighborhood or workplace in terms of building structures, hazardous materials, safety precautions that need to be taken, etc.

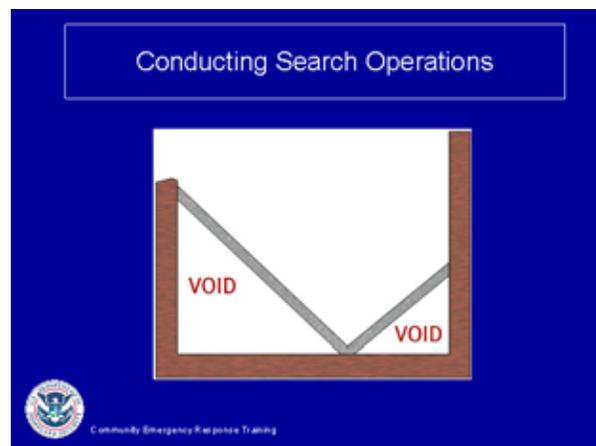
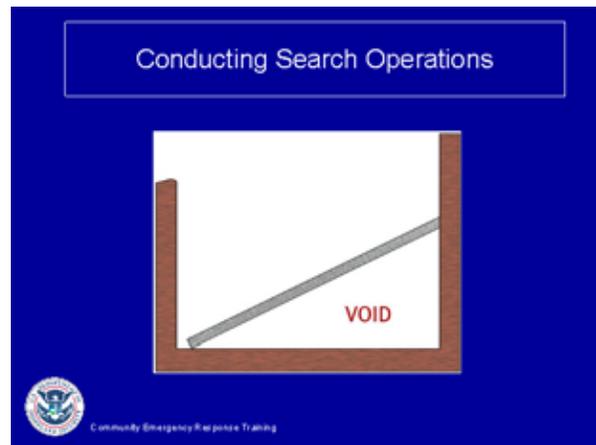
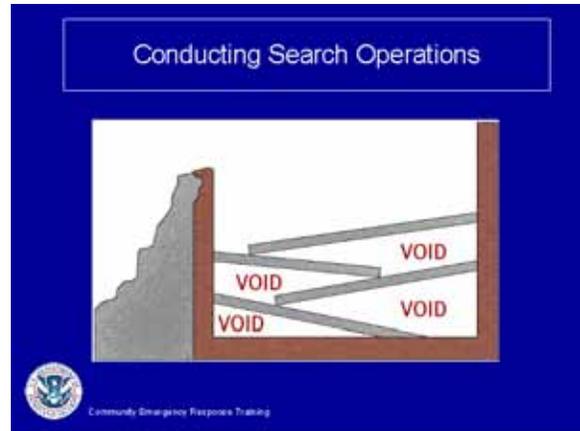
b. The exercise will be based on several different types of local buildings (one for each small group) for the most probable type of disaster that the community will face.

2. Instructions: Use the following steps to complete this exercise:

a. Given the disaster and the specific building assigned to your group, answer the following questions:

- What are the pertinent facts that must be gathered?
- What kind of prediction can you make regarding damage, based on the incident and the building construction?
- What probable search and rescue problems can you identify?
- What specific safety considerations can you identify?

b. Select a spokesperson to present your group's responses to the class.



When the decision is made to initiate search operations, CERT members must inspect the area assigned by the CERT Area Team Leader. The search operation involves two processes:

- Employing search techniques based on the size-up
- Locating potential victims

Locating Potential Victims – The first step in locating potential victims is to conduct a size-up of the situation inside the structure to gather more precise information about damage and to develop priorities and plans. The data gathered will provide more information about areas of entrapment or voids. There are several types of voids: pancake void, lean-to-void, “V”-void and individual voids.

Conducting Search Operations

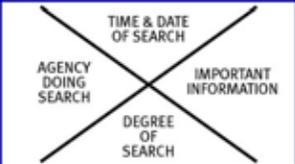
Individual Voids




Community Emergency Response Training

Effective Search Methodology

- ◆ Indicates rescuer location
- ◆ Prevents duplication of effort




Community Emergency Response Training

Search Methods

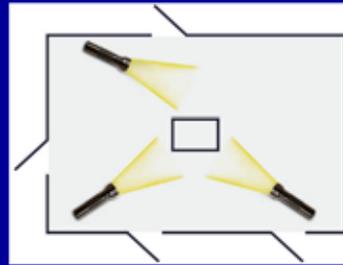
1. Call out to victims.
2. Use systematic search pattern.
3. Stop frequently to listen.
4. Triangulate.
5. Mark searched areas to document results.
6. Report results.



Community Emergency Response Training

Some of this information may be known through planning, but CERT members may need to get some information by talking to bystanders or those who are familiar with the structure. Bystanders may be confused by the event. They may tend to exaggerate potential numbers or may not even remember the event accurately. Gather as much information as you can, though, because it will be useful for planning search priorities and implementing the search. CERT members should ask questions when talking with these individuals

Conducting Search Operations



Community Emergency Response Training

Conducting Rescue Operations

Primary Functions:

- ◆ Creating safe rescue environment
 - Lift objects out of the way.
 - Use tools to move objects.
 - Remove debris.
- ◆ Triage or stabilizing victims
- ◆ Removing victims



Community Emergency Response Training

Creating a Safe Environment

Goals:

- ◆ Maintain rescuer safety.
- ◆ Triage in lightly and moderately damaged buildings.
- ◆ Evacuate victims quickly from moderately damaged buildings-minimize injury.



Community Emergency Response Training

Conducting Rescue Operations

A. Rescues involve three primary functions:

1. Creating a safe rescue environment by lifting objects out of the way, using tools to move objects and removing debris.
2. Triage or stabilizing victims.
3. Removing victims in a moderately damaged building. Call in the medical team in a lightly damaged building.

B. Creating a Safe Environment – There are three goals for all rescue operations:

1. To maintain rescuer safety
2. To triage in lightly and moderately damaged buildings
3. To evacuate victims as quickly as possible from moderately damaged buildings while minimizing additional injury

C. None of these goals can be achieved without creating as safe an environment as possible before attempting rescue. There are, therefore, certain precautions that rescuers must take to minimize risk.

Precautions to Minimize Risk

Safe Environment:

- ◆ Know your limitations
- ◆ Follow safety procedures.
- ◆ Remove debris by:
 - > Leveraging.
 - > Cribbing.



Community Emergency Response Training

Removing Victims

Types of victim removal include:

- Self-removal or assist
- Lifts and drags



Allow victims to extricate themselves when possible.



Community Emergency Response Training

Extrication Method

Depends upon:

- ◆ General stability of immediate environment.
- ◆ Number of rescuers available.
- ◆ Strength and ability of rescuers.
- ◆ Condition of victim.



Community Emergency Response Training

Exercise: Removing Victims

A. Purpose: This exercise will provide you with an opportunity to practice the removal of victims from a collapse situation, using leveraging/cribbing and drags and carries. You will be assigned into groups and assigned to do a room search, locate victims, and remove the victims.

B. Instructions: Use the following steps to complete this exercise:

1. Enter your assigned "collapse site" room, do a room search.
2. Locate the victims.
3. Use leveraging and cribbing procedures to free them.
4. Use appropriate lifts and drags to remove the victims from the room (and, if possible, from the building).
5. Rotate roles so that there are two new victims. Repeat the exercise until everyone has had an opportunity to practice being a rescuer.

1. If your CERT class continues on the same day, take your break and return to this classroom.

2. If your CERT class continues on another day (next week or next month) your **Homework**

Assignment is to:

- Read and become familiar with Unit Seven: CERT Organization before the next session.

