Light Search and Rescue Operations

CERT Basic Training
Unit 5
Search and Rescue

- Consists of three separate operations
  - Sizeup: Using 9-step, continual model
  - Search: Locating victims and documenting
  - Rescue: Extricating victims
Deciding to Attempt Rescue

- Decision based on three factors
  - The risks involved for the rescuer
  - Greatest good for the greatest number
  - Resources and manpower available
Goals of Search and Rescue

- Rescue greatest number in shortest amount of time
- Get walking wounded out first
- Rescue lightly trapped victims next
- Keep the rescuer safe
Effective Search and Rescue

- Depends on:
  - Effective sizeup
  - Rescuer safety
  - Victim safety
Unit Objectives

- Identify sizeup requirements
- Describe most common search techniques
- Use safe techniques for debris removal
- Use safe techniques for victim extrication
- Describe ways to protect rescuers
Unit Topics

- Safety During Search and Rescue Operations
- Conducting Interior and Exterior Searches
- Conducting Rescue Operations
CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress

REMEMBER: CERT SIZEUP IS A CONTINUAL PROCESS
Gather Facts

- Time of event and day of the week
- Construction type/terrain
- Occupancy
- Weather
- Hazards
Assess and Communicate Damage

The CERT mission changes if:

- Damage is light
- Damage is moderate
- Damage is heavy
Light Damage

- Superficial
- Broken windows
- Superficial cracks or breaks in wall surface
- Minor damage to the interior contents
- Safe to enter and remain
Moderate Damage

- Visible signs of damage
- Decorative work damaged or fallen
- Many visible cracks or breaks in wall
- Major damage to interior contents
- Building still on foundation
- Enter only to save lives
Heavy Damage

- Partial or total collapse
- Tilting
- Obvious structural instability
- Building off foundation

Do not enter a building with heavy damage under any circumstances
Consider Probabilities

- How stable is the situation?
- What else could go wrong?
- What does it mean for the search and rescue?
Assess Your Situation

- Is the situation safe enough to continue?
- What risks will rescuers face?
- What resources are needed?
- What resources are available?
Rescue Resources

- Personnel
  - Firefighters
  - Police
  - Nurse, M.D.
  - Contractor
- Tools
  - Crowbars
  - Auto jacks
  - Chainsaws
- Equipment
Establish Priorities

- What should be done?
- In what order?
- How to rescue the greatest number in the shortest amount of time?
Make Decisions

● Keep in mind:
  ▪ Safety of CERT members
  ▪ Life safety for victims and others
  ▪ Protection of the environment
  ▪ Protection of property
Develop Plan of Action

- Focus operation on established priorities and decisions
- Provide for documentation to give to responding agencies
- Provide for documentation to become part of CERT records
Sizeup: Step 8

Take Action

- Based on plan developed during Step 7
Sizeup: Step 9

Evaluate Progress

- Most critical step
- Monitor plan’s effectiveness and safety

REMEMBER:
CERT SIZEUP IS A CONTINUAL PROCESS
Specific Safety Considerations

- Make rescuer safety primary concern
- Use a buddy system
- Be alert for hazards
- Use safety equipment
- Rotate teams
Structural Voids

If you see collapsed floors or walls, get out!

Pancake Void

Lean-to Void

‘V’ Void

X = Voids
Individual Voids

- Spaces where victims may seek protection
  - Bathtubs
  - Underneath desks
  - Inside cabinets
  - Under/next to beds
  - Inside closets
Upon entering search area:
- Make a slash
- Enter info

Upon leaving search area:
- Complete ‘X’
- Enter info
Search Markings

What information do you mark?

- Date
- Time In
- Time Out
- CERT I.D.
- Areas Searched
- Victims

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Search Markings

Example:

2/15/08
In: 1430
Out: 1515

FL 1-2 searched
Stairs to FL-3 unsafe

2L
Moved to
CERT-23 med
ops

CERT-23
Call out to victims, “If anyone can hear my voice, come here”

Ask any victims who do respond for more information about the building or others who may be trapped

Victims might be in shock or confused
Search Methodology

- Bottom-up/top-down for a multi-story building
- Right wall/left wall for a single floor
- Stop frequently to listen
Search Methodology

- Stop frequently to listen for:
  - Tapping
  - Movement
  - Voices
Search Methodology

- Triangulation allows rescuers to view a location from several perspectives

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Search Methodology

- Keep records of rescued victims and of those who remain trapped or are dead
- Report information to emergency services personnel
Exterior Search

- Set up a grid search
  - Set distance between searchers according to visibility and debris
  - Overlap patterns for full coverage
  - Search in as straight a line as possible
  - Mark areas that have been searched
Rescue Operations

- Remove objects and debris to free victims and create a safe rescue environment
- Triage victims
- Remove victims
- Remove debris
Creating a Safe Environment

- Maintain rescuer safety
- Triage in lightly and moderately damaged buildings
- Evacuate victims as quickly as possible
Precautions to Minimize Risk

- Know your limitations
- Follow safety procedures
- Remove debris by:
  - Leveraging
  - Cribbing
Proper Lifting Procedures

- Back straight
- Bend knees
- Keep load close to body
- Push up with legs
Leveraging and Cribbing

- For heavy lifting
- Performed in tandem
- Helps extricate victims

- Various materials and objects may be used
Two Types of Removal

- Self removal or assist
- Lifts and drags
Which Extrication Method?

- General stability of the immediate environment
- Number of rescuers available
- Strength and ability of the rescuers
- Condition of victim
One-Person Arm Carry

- Lift around victim’s back and under knees
- Lift victim by keeping your own back straight and lifting with legs
Pack-Strap Carry

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Two-Person Carry

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Chair Carry

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Unit 5: Light Search and Rescue Operations
Blanket Carry
Log Rolling

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Unit 5: Light Search and Rescue Operations
Blanket Drag

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Unit 5: Light Search and Rescue Operations
You should know:

- How to decide whether to attempt rescue
- The objectives of interior and exterior search and rescue
- How to perform search and rescue sizeup
- Building markings
- Rescue functions
- How to remove debris
- How to extricate victims
Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session