



CHARLESTON, DORCHESTER AND BERKELEY COUNTIES

Field Operations Guide

Field Operations Guide

Name: _____

Team: _____

Team Leader : _____

Leader Phone: _____

EOC: _____

Staging Area 1 : _____

Staging Area 2: _____

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CERT Equipment Checklist

- **CERT Bag**
 - **Water-2 bottles per S&R team**
 - **Non-perishable food**
 - **Water purification tablets**
 - **Leather work gloves**
 - **Goggles**
 - **Dust masks**
 - **Flashlight**
 - **Batteries/extra bulbs**
 - **Secondary flashlight/light sticks**
 - **Note pads**
 - **Markers**
 - **Pens**
 - **Duct tape**
 - **Masking tape (2")**
 - **Scissors**
 - **Crescent wrench**
 - **First aid kit**
 - **Orange spray paint**
 - **Triage tape**
 - **Utility knife**
-

Before you leave your home...

- Check family to ensure safety
- Inspect house for damage
- Inspect utilities and secure as needed
- Call out-of-state contact at _____
- Get family disaster supplies

Water Purification

Water can be purified by three methods- heat, filtration and chemical treatment. All pathogens can be killed by boiling water for 10 minutes. For filtration and chemical treatment, use the following charts as guides.

Pathogen	Maximum Filter Pore Size
Giardia and ameoba cysts	5 microns
Enteric bacteria	0.2 to 0.5 microns
Cryptosporidium	3 microns
Parasitic eggs and larvae	20 to 30 microns

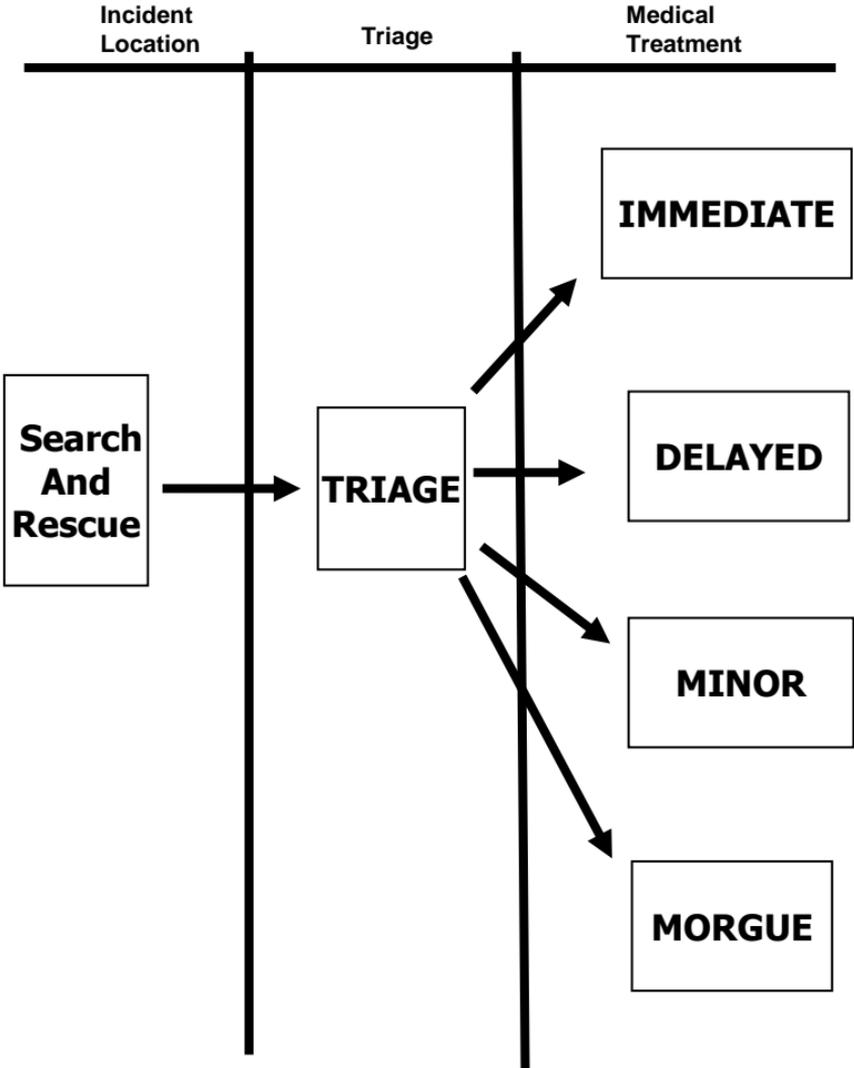
Chemical	Clear Water (4ppm)	Cloudy Water (8ppm)
Sodium Chlorine (household bleach - 5.25% ,unscented) shake/stir, let stand for 30 minutes before using	2 drops/qt. 8 drops/gal	4 drops/qt. 16 drops/gal

Triage in a Disaster Environment

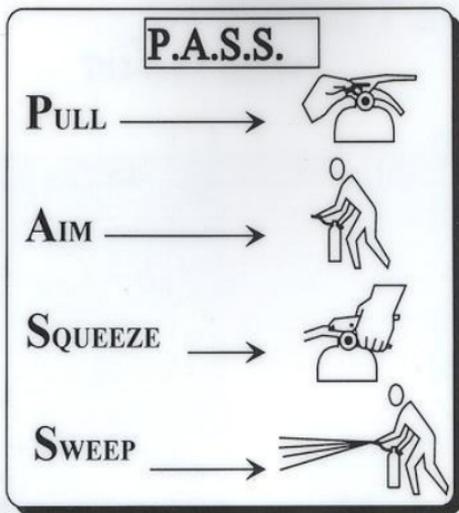
Triage, like other disaster response efforts, begins with size-up. The general procedure for triage in a disaster environment is as follows:

- **Stop, Look, Listen, and Think.** Before you start, stop and size up the situation by looking around you and listening. Above all, THINK about how you will approach the task at hand. Continue to size up the situation as you work.
- **Conduct Voice Triage.** Begin with voice triage, calling out something like, "Emergency Response Team. If you can walk, come to the sound of my voice." Tag green, instruct those survivors who are ambulatory to remain at a designated location, and continue with the triage operation. Utilize volunteers.
- **Follow a Systematic Route.** Start with victims closest to you and work outward in a systematic fashion.
- **Conduct Triage Evaluation.** Evaluate victims and tag them, Green (minor), Red (immediate), Yellow (delayed), or Black,(DEAD). Remember to evaluate the walking wounded. Everyone must get a tag.
- **Treat "I" Victims Immediately.** Initiate airway management, bleeding control, and/or treatment for shock for Category I (immediate) victims.
- **Document Results.** Document triage results for:
 - Effective deployment of resources.
 - Information on locations of victims
 - A quick record of the number of casualties by degree of severity.This will be very useful information for responders and transportation units.
- Always wear protective gear when performing triage, so that you do not endanger your own health.

CERT MEDICAL OPERATIONS



Operating a Fire Extinguisher

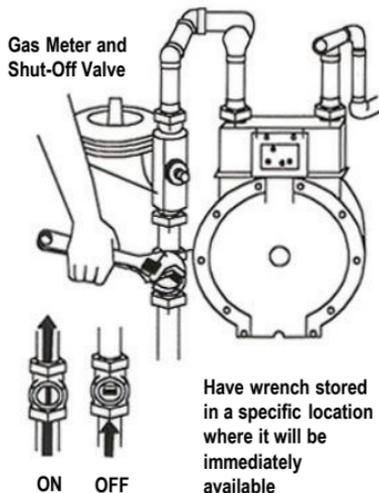


Always operate extinguisher in upright position. As shown in figure, the acronym to remember when operating a portable extinguisher is PASS: Pull, Aim, Squeeze, Sweep. Aim at base of fire

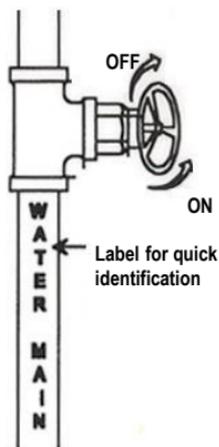
FIRE TYPE	EXTINGUISHING	
	AGENT	METHOD
ORDINARY SOLID MATERIALS  	WATER FOAM	REMOVES HEAT REMOVES AIR AND HEAT
	DRY CHEMICAL	BREAKS CHAIN REACTION
FLAMMABLE LIQUIDS  	FOAM CO ₂	REMOVES AIR
	DRY CHEMICAL HALON	BREAKS CHAIN REACTION
ELECTRICAL EQUIPMENT  	CO ₂	REMOVES AIR
	DRY CHEMICAL HALON	BREAKS CHAIN REACTION
COMBUSTIBLE METALS  	SPECIAL AGENTS	USUALLY REMOVE AIR

Utility Shut-Offs

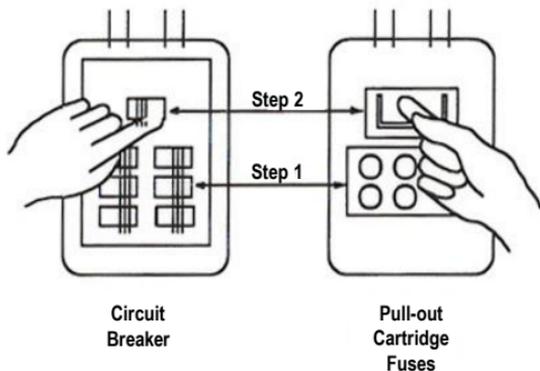
Gas Meter and Shut-Off Valve



Water Shut-Off



Electrical Shut-Off



Identifying HAZMAT In Fixed Facilities

HEALTH	FLAMMABLE	REACTIVE
<p>4- Too dangerous to enter vapor or liquid</p> <p>3- Extremely dangerous- use full protective clothing</p> <p>2- Hazardous- Use breathing apparatus</p> <p>1- Slightly hazardous</p> <p>0- Like ordinary material</p>	<p>4- Extremely flammable</p> <p>3- Ignites at normal temperatures</p> <p>2- Ignites when moderately heated</p> <p>1- Must be preheated to burn</p> <p>0- Will not burn</p>	<p>4- May detonate- Vacate area if materials are exposed to fire</p> <p>3- Strong shock or heat may detonate- Use monitors from behind explosion-resistant barriers</p> <p>2- Violent chemical change possible- Use hose streams from distance</p> <p>1- Unstable if heated- Use normal precautions</p> <p>0- Normally stable</p>
<div style="text-align: center;">  <p>Avoid use of water</p> </div>		

Stored hazardous materials are sometimes identified by means of the National Fire Protection Association (NFPA) 704 Diamond System of placards. These placards are located on the outside of buildings at the entrance to the storage area. An example of NFPA 704 Diamond is shown in the figure above.

Identifying HAZMATs in Transit

Quantities of transported hazardous materials that meet Department of Transportation requirements are marked with warning placards. The placards are 10 3/4" high and must be on all four sides of the vehicle. Each diamond-shaped placard includes the color, symbol, and name of the class into which the hazard falls.



CLASS 1- Explosives

CLASS 2- Gases

CLASS 3- Flammable liquids

CLASS 4- Flammable solids

CLASS 5- Oxidizers

CLASS 6- Toxic materials

CLASS 7- Radioactive materials

CLASS 8- Corrosive materials

CLASS 9- Miscellaneous dangerous goods

DANGEROUS- Indicates a mixed load of hazardous materials

Identifying HAZMATs in Transit

Included with the DOT placards are United Nations identification numbers specific to each transported substance. The numbers are displayed inside the placard or in an orange rectangle immediately below the placard. **DOT placards should be a stop sign for CERT members. If they are present, there is danger. STOP!**



HAZMAT Procedure

1. Stay upwind.
2. Call 911.
3. If authorities cannot be reached, isolate the area as much as possible.
4. Do not attempt to rescue injured until situation is assessed.
5. **Do not walk into or touch spilled material. Avoid inhalation of fumes, smoke and vapors.**

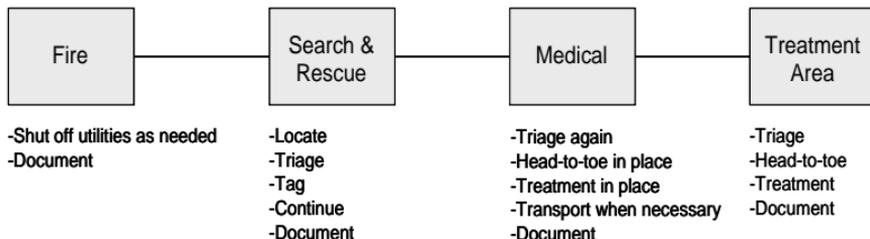
CERT Decision- making

The extent of involvement for the various CERT functional teams varies depending on the level of damage encountered.

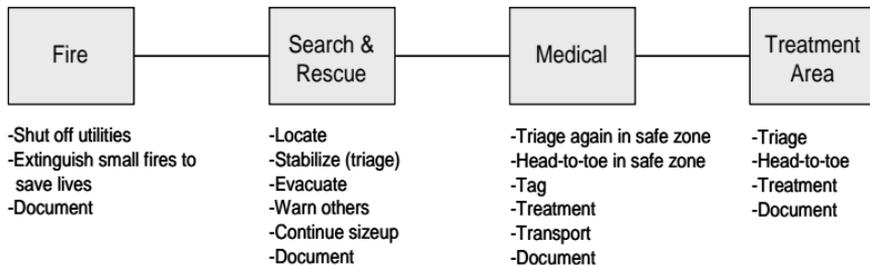
Team Tasks Based On Damage Level

Tasks required of Fire, Search and Rescue, Medical, and Treatment Area teams based on the degree of damage to the structure.

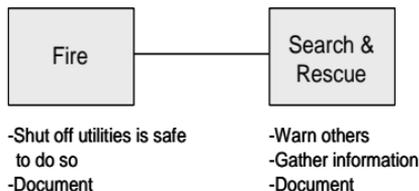
Light Damage



Moderate Damage



Heavy Damage



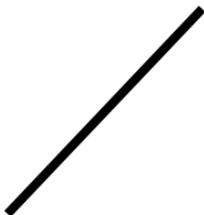
CERT Rescue Size-Up

CERT Rescue Efforts Based On Degree Of Damage

Degree Of Damage	Should Rescue Be Attempted?
Heavy	No. Too dangerous to enter. Warn people to stay away.
Moderate	Yes , but perform only quick and safe removals; limit onsite medical care to checking for breathing, stopping major bleeding, and treating for shock. Remove victims to treatment area. Minimize the number of rescuers inside the building.
Light	Yes. Locate, triage, tag, treat and prioritize removal of victims to the designated treatment area.

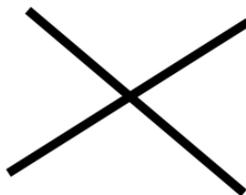
Physical Search-Interior

When you enter



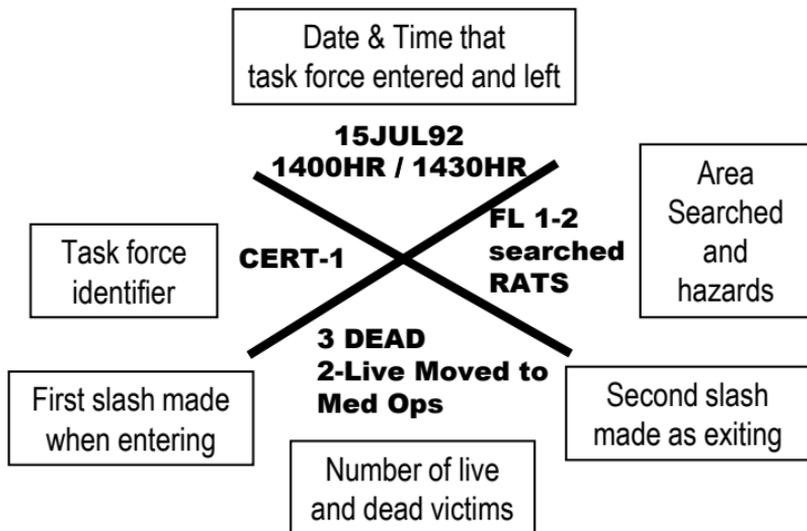
Single slash
Structure or room

When you exit

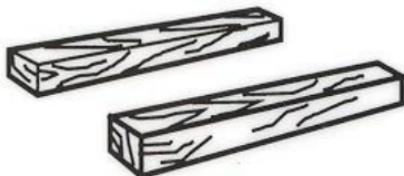
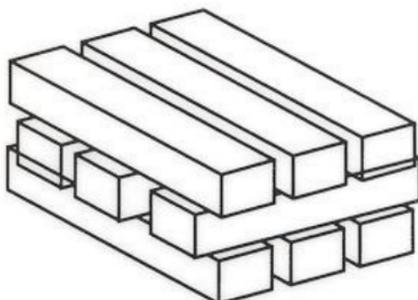


Second slash
Structure or room
(Identify victims & hazards)

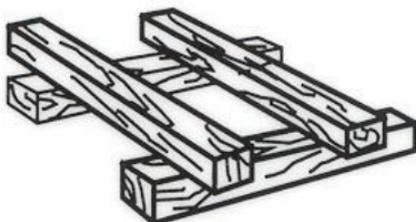
Search Assessment



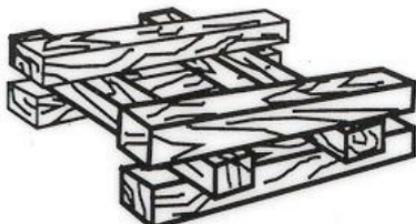
Box Cribbing



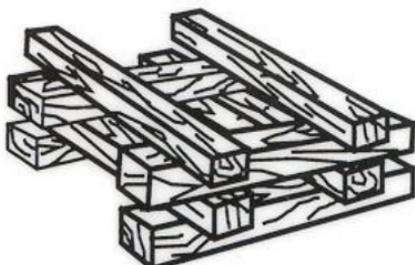
Step 1



Step 2



Step 3



Step 4

Arrangement for Leverage/Cribbing Operation

