

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL FOR VISUALLY IMPAIRED USERS

UNIT 1: INTRODUCTION TO ICS

UNIT INTRODUCTION

As you embark on the next few weeks of NYC Community Emergency Response Team (NYC CERT) training, it is important that you think about your role in the NYC CERT team you will join regarding neighborhood and community preparedness activities, disaster planning, and response.

With regard to protocol and procedure for preparedness and response, the NYC CERT program in New York City is managed and directed by the NYC Office of Emergency Management (NYC OEM). Each individual team represents the neighborhoods and communities in which it serves.

All NYC CERT members must follow the Standard Operating Procedures (SOPs) that have been developed for your protection. The NYC CERT SOPs are a set of policies and procedures that outline deployment, team structure, team development, uniforms and equipment, and identified roles. You are receiving a copy tonight and may also access them at:

http://www.nyc.gov/html/oem/downloads/pdf/cert/cert_web_sops.pdf

UNIT OBJECTIVES

You will learn:

- About the NYC CERT program and its mission;
- The principles of READY NY and how to prepare yourself, your home, and your community;
- A NYC CERT team's ROLE and how NYC CERT teams behave in ACTION;
- What you can expect from training and the course curriculum;
- An overview of the Incident Command System and how NYC CERT fits in; and
- The NYC CERT Deployment Protocol.

UNIT REVIEW

From this point on, everything you learn will fit into the Incident Command System (ICS). Please review the SOPs as the weeks go by.

LOOKING FORWARD

Next week you will begin the Urban Environment units, starting with high-rise building and utility emergencies. The information presented to you in the following weeks will raise your personal awareness to help you stay safe and inform you as to your role as a CERT member.

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INTRODUCTIONS

WHO ARE YOU?

WHY ARE YOU HERE?

WHAT DO YOU HOPE / EXPECT TO LEARN IN THIS PROGRAM?

- Introduce yourself and say a bit about why you wished to join the NYC CERT program.
- Take a moment to write down something about your classmates and their background.
- One of the great things about NYC CERT is each and every individual has something to bring to his or her team: a special interest, professional experience, language competency, etc. You start this training as an asset to your team!

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NYC CERT

- What is CERT?
- What do you think it does?
- What do you think your role as a CERT member might be?

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NYC CERT: History

1985 – CERT developed and implemented by Los Angeles Fire Department.

1987 – Whittier Narrows Earthquake underscored the need for CERT.

1994 – CERT expanded by Los Angeles Fire Department and FEMA.

2003 – President Bush asks all Americans to volunteer – Citizen Corps Council.

2003 – OEM becomes managing entity of NYC CERT.

- CERT began in the Los Angeles area in response to first responders unable to get to areas and residents affected by landslides and fires. San Francisco and Portland, Oregon also began CERT programs at this time. CERT allowed communities to be organized to be able to respond to disasters in their neighborhoods prior to emergency personnel arriving. CERT continued to grow along the west coast following the Whittier Narrows earthquake in the Los Angeles area.
- NYC CERT is a part of the national CERT program which is part of the Citizen Corps Council. Other Citizen Corps Council programs include Medical Reserve Corps, Fire Corps, Neighborhood Watch and Volunteers in Police Services (VIPS).
- The NYC CERT program helps train people to be better prepared to respond to emergency situations in their communities.
- The NYC CERT program is about readiness, people helping people, rescuer safety, and doing the greatest good for the greatest number.

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NYC CERT

National FEMA curriculum adapted to NYC.

There are over 54 credentialed teams throughout NYC.

There are more than 1,500 NYC CERT members.

NYC CERT members have responded to Hurricane Sandy and Irene, power outages, building vacates,
crane collapses, and many other emergencies.

NYC CERT members have trained thousands of city residents in emergency preparedness through Ready
NY.

- New York City has adapted the federal curriculum to focus on our urban environment.
- As you will see, the next three units deal exclusively with the NYC urban environment, so that you, as a NYC CERT member, are as prepared as possible to deal with emergencies and disasters in NYC.
- It focuses on the risks and hazards associated with bridges, tunnels, subways, high-rise buildings, cultural diversities, and special needs populations that are present in the urban context, especially when working in New York City.
- NYC CERT has trained more than 1,500 community members in the NYC CERT training curriculum.
- The program currently manages more than 1,500 volunteers and 54 teams.
- There are enough teams to cover all community districts within the five boroughs of NYC.
- There are multiple training classes this cycle, allowing existing teams to add new members.

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NYC CERT: Mission Statement

Inform, educate and train your neighbors on disaster preparedness.

Assist public safety agencies in your local community with public events.

Respond to locally occurring disasters by strictly following CERT protocols and supporting emergency personnel upon their arrival and request.

The mission of the NYC CERT program is to train community-based volunteer teams that will:

- Inform, educate, and train their neighbors on disaster preparedness.
- Assist public safety agencies and local community groups with public events.
- Respond to locally occurring disasters by strictly following NYC CERT protocols and supporting emergency personnel upon their arrival and by request.

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Why do we need CERT in NYC's response community? Nobody knows your community better than YOU!

- Residents know their communities best.
- NYC CERT is looking for those residents who want to help their family, friends, neighbors, and communities before, during, and after emergencies.

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NYC Demographics / U.S Census Bureau 2010

Population = 8,175,133

Population Density = 27,012.5

Elderly: Age 65 and older = 989,191

Elderly: Living alone = 310,684

Disabilities: Population with a mobility disability = 390,480

Language: Immigrant population = 2,981,544

Language: Residents not proficient in English = 1,800,000

Poverty: Population living below the poverty level = 1,520,575

- These are some factors that increase the vulnerability of New York City to the effects of disasters.
- Social vulnerability is created by the circumstances of peoples' lives that decrease their ability to withstand a disaster.
- Some examples of social vulnerability include:
 - Population density
 - Age
 - Disability
 - English proficiency and linguistic isolation
 - Low incomes

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Are you prepared?

- Always take care of yourself first; personal and family preparedness is where to start before working as a team. How can you help someone in a disaster if you and your family are not prepared?
- Ready New York is NYC OEM's education preparedness program. The information from Ready NY enables you and your family to safely prepare for emergencies and disasters. Visit our website at: www.nyc.gov/readyny.
- Your safety and the safety of those in your household is the first step to ensure a successful response!

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Get Informed. Make a Plan. Pack a Go Bag.

- Get Informed:
 - Understand the hazards
- Make a Plan:
 - Meeting places
 - Emergency phone numbers
- Pack a Bag:
 - Go Bag
 - Emergency supply kit

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Ready NY Materials

- NYC CERT members can request Ready NY materials to help educate themselves and their neighbors about emergency preparedness. Every team has a Ready NY Liaison to assist with coordinating Ready NY presentations, tabling events, and ordering materials.
- All of these brochures are available on the internet (www.NYC.gov/ReadyNY) for download, from 311, or from CERT staff. They are available in up to 23 different languages.

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Ready NY DVD

- The Ready New York DVD examines hazards common to NYC and why it is important to prepare for them.
- This video is available on OEM's website (www.NYC.gov/OEM) and is available to NYC CERT volunteers for use in their communities. The DVD is available in English, Chinese, Spanish, and Russian.
- All NYC residents can receive direct messages from OEM:
 - Notify NYC is a service that provides you current information about emergencies specific to your neighborhood. You can sign up by calling 311 or logging on to www.nyc.gov/notifynyc to register.
 - Become a fan of OEM on Facebook (www.facebook.com/nycemergencymanagement), Twitter (www.twitter.com/nycoem), and watch preparedness videos on YouTube (<http://www.youtube.com/user/nycoem?ob=0>).
 - Sign up for Tip of the Week, and Citizen Corps Council newsletters at www.nyc.gov/oem. Visit the NYC CERT Tumblr page at: <http://nyccert.tumblr.com/>

Let's Review

1. Develop an emergency plan.
Why is it important to have two different meeting places? <ul style="list-style-type: none">• The first place is somewhere outside your home where family members can go after leaving.• You need a second meeting place outside your neighborhood that everyone could get to in case there was an emergency in your neighborhood.
2. Work with family and friends to build a support network.
<ul style="list-style-type: none">• Is there someone that might need your help in an emergency?• Who could you call to help you in an emergency?
3. Gather emergency supplies – Go Bag.
<ul style="list-style-type: none">• Most evacuations happen quickly and with little warning. If you and/or your family were forced to evacuate your home, what should everyone bring with them?
4. Gather emergency supplies – Emergency Supply Kit.
<ul style="list-style-type: none">• Are you prepared to shelter in place, which means to stay where you are when it is not safe to leave your home? (Example: Snow storms, high winds, tornadoes, or contaminated air.)• How are these supplies different from those in a Go Bag?

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What's next? As a team . . . Prepare, Respond, and Recover

- CERTs have multiple roles to play in regards to emergencies and disasters.
- To be effective in response to an emergency, teams must also play a part in preparedness and recovery.

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Prepare before an incident or event.

- The idea of preparedness is central to the CERT mission and will be discussed throughout this training as you learn and practice preparedness tools for different emergencies, both as an individual and as a team.
- The preparedness phase of emergency management is very important. Studies have proven that the more prepared people are for emergencies, the calmer and more effectively they respond. As a result, serious injuries and fatalities are avoided or minimized and recovery efforts are more efficient and take less time.
- NYC CERT members play an invaluable role by preparing themselves, their families, neighbors, co-workers, and communities for emergencies.
- During this phase, first responders, emergency managers, non-profit, City, state, and federal agencies and organizations plan and train for different types of responses.
- Take a moment and list below a few things that you can do in your community to increase preparedness.

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Preparedness in Action.

Assess your community.

Participate in Ready NY events.

Staff community events.

Preparedness roles for NYC CERT members include:

- Ensuring your individual and household preparedness.
- Ensuring the preparedness of your friends, neighbors, co-workers, and community.
- Organizing neighborhood preparedness activities.
- Coordinating distribution of preparedness materials.
- Identifying special needs populations prior to an emergency.
- Identifying community members with special skills (doctors, nurses, mental health professionals, retired military personnel, etc).
- Developing a Community Disaster Network that can be used in caring for your communities in a disaster (see Unit 4).
- Providing support to the police and other community-based agencies and organizations during planned events.
- Engaging in post training.

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Respond during an incident or an event.

Response: During an Incident or Event

- Safety is the most important consideration during any NYC CERT activity. This will be covered in every unit of this curriculum.
- Any response must be guided by the NYC CERT SOPs.
- NYC CERT SOPs outline specific deployment procedures for you and your team members to follow.
- In the response phase, the focus is on life safety of those directly impacted as well as people in the immediate area of the incident.

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Examples of CERT in Action: Weather Emergencies, Language Interpretation.

Examples of NYC OEM CERT in Action:

- Haiti Earthquake, January 2010. The City opened the Haiti Earthquake Family Resource Center, a collection of agencies and organizations gathered in one place to provide information and referral to families of victims of the earthquake. CERT volunteers registered clients at intake and escorted them around through the center, providing a familiar face and comfort during a difficult time.
- Staten Island and Queens Microburst, September 2010. CERT teams directed traffic at compromised intersections in Queens, and citywide teams reported damage and dangerous conditions to ensure a timely and effective response.
- Hurricane Irene, August 2011. CERT volunteers deployed citywide to Coastal Storm Evacuation Centers, helping City employees set up the centers, assisting the evacuated New Yorkers at the shelters, and other related tasks. CERT team chiefs also staffed the City's EOC to assist with coordination of the response.
- Hurricane Sandy, October 2012. About 800 CERT members from 49 CERT teams assisted citywide in staffing evacuation centers, shelters, wellness checks for homebound and senior citizens, and general support at the city's various emergency response centers including the Emergency Operations Center, United Operations Resource Center and Logistics Staging Area.

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Recovery: Post Disaster Assistance

Recovery: Post Disaster Assistance

- In the recovery phase, the focus is on re-establishing a safe, stable environment over the long term. This may include:
 - Housing
 - Mental health support
 - Physical health resources
 - Economic recovery
 - Information dissemination
- During recovery, most response agencies will have finished their jobs and will leave. CERTs will play a huge part in their communities' long-term recovery.

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NYC Recovery Efforts

Bronx Casino Bus Crash 2011

CERT assisted at Family Assistance Center in Manhattan.

CERT was called for a technical deployment to provide Chinese interpretation.

Hurricane Sandy 2012

CERT performed wellness checks on homebound residents in impacted areas.

CERT involved in long-term recovery.

NYC CERT assisted City agencies after the October 2012 Hurricane Sandy, which caused systemic damage to buildings and communities citywide.

Some NYC CERT recovery roles included:

- Debris removal
- Food distribution sites
- Damage assessment
- Long Term Recovery Groups

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Curriculum

- The course curriculum is a ten-week training that will educate you and your team to prepare for, respond to, and recover from local emergencies and disasters.
- You will also learn and develop resources to prepare yourself and family members for emergencies situations.

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Training Units

Preparedness for the Urban Environment I, II & III:

- These are NYC CERT-specific units which focus on threats and hazards found throughout the five boroughs. These units reflect the unique emergency response community in which NYC CERTs operate.

Disaster Medical Operations I & II:

- NYC CERT members learn triage and basic first aid.

Fire Safety:

- NYC CERT members learn about fire safety, suppression, and different types of extinguishers.

Light Search & Rescue:

- NYC CERT members learn how to conduct search and rescue operations in and around lightly-damaged structures.

Police Science/Terrorism Awareness:

- NYC CERT members learn basic traffic safety procedures and how to recognize the indicators of a terrorist incident.

Disaster Simulation:

- NYC CERT members review the 10-week curriculum and simulate a disaster scenario.

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Graduation:

All cycle classes graduate together.

Attended by Mayor, Deputy Mayor, OEM, NYPD, and FDNY Commissioners, and other VIPS
Graduates' families and friends invited.

- After you complete this training, you will be invited to participate in your graduation ceremony.
- Past ceremonies have been held at NYC OEM, FDNY headquarters at MetroTech, NYPD headquarters at One Police Plaza, and both the NYC Fire Academy on Randall's Island, the NYPD Academy in Manhattan and most recently at the Federal Reserve Bank of NY.
- You will receive your certificate of completion and the honor of wearing your NYC CERT credential ID.

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Expectations of Students

Expectations for the next 10 weeks

Commitment
Attendance
Timeliness
Participation
Homework

- **Commitment** – You are making a commitment to your team, your community, and to the NYC OEM.
- **Attendance** – You must attend all classes in order to graduate. If you cannot attend your scheduled class, you must speak to the OEM liaison that will provide you with a schedule of other classes that you can attend.
- **Timeliness** – You must be on time for class. If you miss the first 15 minutes, you must make up the class.
- **Participation** – It is to your benefit to actively participate— the more engaged you are, the more you will learn!
- **Homework/Quizzes** – You must complete your homework assignments on time and be prepared to discuss them in class.

Please note: Your involvement in this training program does not guarantee your acceptance into the program. Class instructors may ask you to leave the program at any time based on your attendance and engagement during the class. Prior to this action they will sit down with you to discuss any corrective action that can be taken that will allow you to stay in class. This is done only to maintain the integrity of the NYC CERT program.

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Expectations after Graduation

Each member is asked to volunteer for a minimum of one calendar year.
You receive your temporary ID at your disaster simulation and your permanent credential six months
after graduation provided that you're an active member.
Strike a balance between CERT work and other areas of your life.

- NYC CERT requires a one-year commitment to your local team and community. As with any professional volunteer organization, once you have received your initial training, it is expected that you remain active for this minimum amount of time.
- You will take the education and experiences you have with NYC CERT with you wherever you go.

Incident Command System and NYC CERT Response Protocols

Incident Command System Background

The Incident Command System (ICS) has been in existence across the country for over 30 years. It is a management concept widely used in emergency response to assist in effectively managing an incident. Each incident will have an incident commander and the ICS system will allow him/her to manage both a growing incident as well as an incident that is starting to downsize.

In the 1970s, a consortium of first responders in southern California identified several recurring problems involving multi-agency responses, such as:

- **Non-standard terminology** among responding agencies
- Lack of capability to **expand and contract** as required by the situation
- **Non-standard and non-integrated communications**
- Lack of **consolidated action plans**
- Lack of **designated facilities**

Efforts to address these difficulties resulted in the development of the ICS model for effective incident management. Although originally developed in response to wildfires, ICS has evolved into a system that is appropriate for all types of emergencies as well as a tool for NYC CERT teams to use to organize, assemble and deploy.

LEADERSHIP AND ORGANIZATION:

Real incidents are chaotic, and therefore clear, effective on-scene leadership and organization are very important. Most importantly, on-scene management will help the NYC CERT team to:

- **Maintain the safety of the NYC CERT team members.**
- **Provide clear leadership and an organizational structure.**
- **Improve the effectiveness of the team by allowing the team to:**
 - Identify the scope of the incident. (What is the problem?)
 - Determine an overall strategy. (What can we do, and how will we do it?)
 - Deploy teams and resources. (Who is going to do what?)
 - Document all actions and results in as much detail as possible.
 - Convene after-action reviews (AARs) to assess successes and challenges and develop a work plan to prepare the team for a better response to the next incident.

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ICS STRUCTURE

The ICS structure develops in a top-down fashion that is based on the size, complexity and needs of a particular incident. As you will see in the diagram below, the incident command breakdown is simple – the incident commander is on top because he/she has the most responsibility.

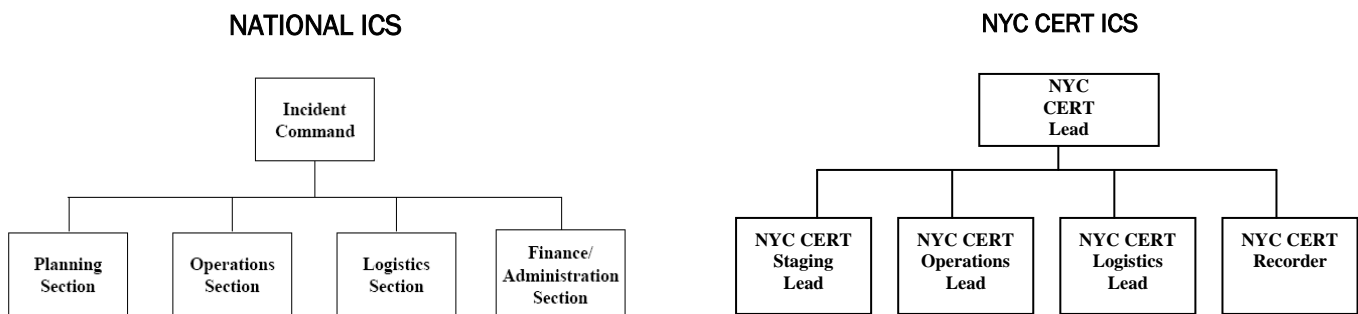
The ICS organization is built around five major components or roles:

- Command
- Planning
- Operations
- Logistics
- Finance/Administration

NYC CERT uses the following ICS functions or roles:

- NYC CERT Lead
- NYC CERT Staging Lead
- NYC CERT Operations Lead
- NYC CERT Logistics Lead
- NYC CERT Work Recorder

The relationship among these components is shown below.



Typically, the first professional emergency responder to arrive on the scene will assume the role of the incident commander, but as additional professional emergency responders arrive command will transfer on the basis of who has primary authority for overall control of the incident.

As incidents grow in size or become more complex, the responsible jurisdiction or agency may assign a more highly qualified incident commander. At transfer of command, the outgoing incident commander must give the incoming incident commander a full briefing and notify all staff of the change in command.

We will discuss NYC CERTs' roles and responsibilities when arriving first on the scene as well as the transfer of command in this unit.

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REVIEW OF ICS ROLES:

Let us take a moment to review how this entire scenario fits within the scheme of ICS and the role of the incident commander. This unit poses the questions that need to be asked regarding an event or an emergency.

- What is the problem?
***The incident commander** must first identify the scope of the incident and determine an overall strategy for the incident.*
- Who is going to do what and how?
***The operations lead** will request and manage the necessary teams and resources needed for the incident.*
- Who will keep track of NYC CERT Personnel?
***The staging lead** will be responsible to keep track of NYC CERT members as they arrive and are either deployed or relieved from their assignments.*
- Who will acquire the resources needed for this incident?
***The logistics lead** will procure the necessary goods and resources.*
- Who will keep a record of the paperwork and actions taken at the incident?
***The recorder** will keep accurate records of the management of the incident.*

You now have had an opportunity to get a sense of how your NYC CERT team would organize itself during a disaster.

NYC CERT members are expected to apply ICS for emergencies as well as planned events. Moreover, ICS remains the same whether CERT members are working in their regular team or with other teams. For instance, your team chief is your day-to-day leader, but he or she may not necessarily be your team's CERT Lead at an incident. ICS may also be useful in team management in terms of delegating responsibilities and creating a manageable span of control. All teams have an existing structure, some of which are based on ICS. When you join a team, you will be placed and expected to work in the existing structure.

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Incident Command System and NYC CERT Response Protocols

Where do we CERTS fit in?

- The intent of this unit is to familiarize students with ICS and how it is used to organize and manage your team during an incident/event.
- We will also discuss NYC CERT response protocols for both incidents and events.

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Objectives

To understand the basics of the Incident Command System (ICS)
CERT deployment procedures for NYC
Team organizational structure

By the end of the unit, you should be able to:

- Understand the basics of ICS.
- Familiarize yourself with the NYC CERT deployment policies.
- Organize your team using the ICS structure.

As a NYC CERT member, understanding the ICS system and how it operates is one of the most important objectives in this curriculum. Even as this training continues, you will notice that ICS is a standard protocol in any type of emergency response we discuss. You will become more familiar with this concept as the weeks move forward and be able to put it into action during the disaster simulation.

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Incident Command System

Standardized Management Tool

Provides clear leadership and organizational structure

Common terminology

Flexible organization

Used to organize large or small incidents or events

As stated in the introduction to ICS:

- ICS is used by all responder agencies to quickly organize workers into manageable teams.
- The ICS system allows for one incident commander for every event or incident.
- Common terminology allows all responding agencies to speak the same language as they build the organizational structure.
- Flexible modular organization enables the incident commander to expand the size of the response based on need and complexity. As the incident grows, so does the size of the organizational chart. The ICS organization builds from the top down.
- ICS is used in all incidents and events. At small scale incident or events the incident commander is responsible for the majority of the roles within the organization. As the incident grows in size, the incident commander must delegate his/her authority to maintain a manageable span of control.

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Sample ICS Organization Chart

- This chart illustrates a large scale incident that requires a full expansion of the ICS organization.
- ICS is adaptable to any emergency, incident, or event.
- Its organizational structure is based on the size and complexity of the incident.
- ICS maintains both chain of command and span of control with all information flowing back to the incident commander.
- Any unit that is not activated is the responsibility of the incident commander.

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NYC CERT Organization Chart

- This chart illustrates a sample CERT team's organization at an incident.
- Its organizational structure is based on the size and complexity of the incident.
- CERT ICS maintains both chain of command and span of control with all information flowing back to the CERT lead.
- Any unit that is not activated is the responsibility of the CERT lead.

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Functional Responsibilities of ICS:

Command is responsible for maintaining overall responsibility.

Operations is responsible for direct tactical actions.

Planning prepares incident action plan and maintains resource status.

Logistics provides support and resources.

Finance/Administration handles the cost accounting and documentation of expenses.

- Command, Operations, Planning, Logistics and Finance and Administration are the five major components of ICS.
- The incident commander has the responsibility for establishing the command structure, the objectives for the incident or event and management of the entire incident.
- As the incident grows in size or complexity, the incident commander must expand the ICS structure and delegate authority to members of the team.
- The general staff (Operations, Planning, Logistics and Finance and Administration) will carry out the objectives of the incident commander.
- The incident commander should recognize the anticipated need to expand the incident.
- Tasks should be delegated based on prior training and experience of the member.
- Tasks that are not delegated are the responsibility of the incident commander.

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Span of Control

- Span of control is the key to effective and efficient incident management.
- An acceptable supervisor-to-subordinate ratio ranges from 1:3 to 1:7 based on the type and complexity of the incident, nature of the task, distances between personnel and resources, and hazards and safety factors.
- Monitoring the span of control in the ICS organization is a major responsibility of the NYC CERT lead.
- The optimum span of control is one supervisor to five members.

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Resources

- The following pages will define resources and how a NYC CERT can become a deployable resource.
- All resources must be accounted for and the incident commander must be notified of their availability before objectives can be established.

Definition of Resources: Consist of all personnel and major items of equipment available for assignment to incidents.

CERTs may be a resources if we are ready, personnel and equipment.

- A NYC CERT team cannot be considered a resource unless its members are properly equipped with their NYC CERT helmet, vest and ID card.
- The CERT lead will establish a plan of action based on the objectives of the incident, tactics may have to be altered based on the resources available.
- The logistics section lead is responsible for organizing the resources and informing the CERT lead of resource availability.

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Facilities

- The following pages will be used to describe facilities and discuss the common terminology in the ICS structure.
- A facility is established at every incident.

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Incident Facilities

Command Post

Staging Area

CERT facilities may also include: Assembly area and tool cache

- Every emergency is different, so the type of facility that will be set up will be based on the incident.

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Command Post

- There is only one command post per incident.
- CERT lead reports to command post to receive instructions for the rest of the team. CERT does not form its own command post in NYC.
- Command post may be moved if current location poses a safety risk.

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Staging Area

- Staging area is where all ready resources – equipment, supplies, and personnel – are kept.
- Resources at the staging area must be ready to deploy at any moment.

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NYC CERT Response Protocol and Deployment Policy
If an incident or event takes place what should you do?

- The next pages will discuss NYC CERT response protocols and deployment policies.
- All resources allocated for an incident must be accounted for.
- NYC CERT teams must adhere to established protocols so they may be properly deployed and utilized as a resource.

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3 Types of Deployment

Team Deployment

Can be OEM-initiated or CERT-initiated
For localized emergencies or events
Team Chief will designate CERT lead at incident

All-hands Deployment

OEM-initiated
For mass need and time-sensitive situations
CERT lead and ICS structure established by OEM

Technical Deployment

OEM-initiated
Deploys only CERT members with specific, documented skills

- Different deployments may have your working in different scenarios – some with your team; some with CERT members from other teams.

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Deploying to and Emergency: OEM-initiated

OEM contacts team chief for an incident requiring CERT.

Team Chief assembles team. CERT Lead calls OEM when team is available.

Upon OEM approval, CERT team reports to approved staging area and meets POC - Point of Contact.

CERT Lead calls Watch Command upon arrival.

- OEM has protocols within the 911 system that notifies them of incidents that occur within the five boroughs.
- As OEM becomes aware of an incident it will determine if the responding agencies can be supported by a NYC CERT response.
- If a CERT team is needed, OEM will notify the CERT team chief in the area of occurrence to assemble his/her team for a possible deployment.

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Deploying to an Emergency: CERT-initiated

CERT member becomes aware of an incident that may require CERT action.

Call 911.

Contact Team Chief.

Team Chief assembles team. CERT Lead calls OEM when team is available.

Upon OEM approval, team reports to approved staging area and meets POC.

CERT Lead calls Watch Command upon arrival.

- As stated earlier, no NYC CERT team or members can self-deploy.
- If a team believes there is a role for NYC CERT, the team chief or designee will notify Watch Command and be guided by its instructions.
- Teams must first assemble at a designated location to organize and put on their proper protective gear and identification.
- NYC CERT SOPs for incidents must be strictly adhered to.
- Trained NYC CERT members can provide more detailed information to 911 dispatchers so that first responders will receive clear information about what they are responding to.
- OEM Watch Command should be contacted by only the team chief or his/her designee to avoid over-taxing the system.
 - Team members who become aware of an incident in which OEM should be involved should contact their team chief and relay the information.
 - Team members should be guided by their team chief's instructions.

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Examples of an Emergency

Fires

Manholes

Blackouts

Subway derailments

Coastal Storms

Severe Weather

- Emergencies come in all shapes and sizes.

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Deploying to Special Events: OEM-initiated

OEM requests CERT at large, citywide planned events.

CERT Lead calls Watch Command upon arrival at assigned spot; provides number of available volunteers and contact information.

CERT Lead calls Watch Command when team stands down.

- Special events such as the Five Boro Bike Tour are an excellent way for NYC CERT teams to test their abilities.
- Use planned events to:
 - Test the team's notification system.
 - Strengthen organizational skills.
 - Operate as a group in a non-emergency situation.
- All NYC CERT teams must follow this response protocol so OEM can notify event organizers of the team's presence and properly support the team.

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Deploying to Special Events: CERT-initiated

CERT organizes or attends local planned events.

CERT Lead notifies CERT staff with event information, number of volunteers and contact info of CERT lead.

CERT Lead notifies CERT staff when team stands down.

- When CERT organizes or attends small planned events in their district, the team chief does not need to call into Watch Command but should notify CERT staff.

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Examples of Special Events

OEM-initiated:

Five Boro Bike Tour

Autism Speaks Walk

National Night Out

National Preparedness Month

CERT-initiated:

NYCHA Family days

Block Parties

Neighborhood Fairs

Local parades

- OEM requests CERT participation at large, annual, citywide planned events.
- CERT can get involved in smaller, local events as well.

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How Can You Be Notified?

Phone tree

Email

Text

Radio

- All NYC CERT teams must use a proven method for contacting team members for deployment.
- Using multiple methods such as e-mail, text and phone trees is more effective since any one method may fail. Some means of communication may be more effective during different times of the day, and redundancy helps ensure that messages are received.
- Contact methods must be constantly tested and information updated.

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Phone Tree

- The phone tree is the most widely-used method of team notification.
- Call-downs and transmitting information up the chain can work in many ways. See what works best for your team.
- The phone tree only works if it is consistently updated and practiced. Teams should schedule periodic drills testing their phone tree.

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Assembling the Team

1. Contact team members
 2. Team members report to assembly point with: Response bag and CERT ID card
 3. Evaluate # of personnel and their skills
 4. Assign ICS roles.
- NO CERT MEMBER WILL BE ALLOWED TO RESPOND TO AN INCIDENT WITHOUT REQUIRED EQUIPMENT.
-
- Teams should have a prearranged assembly point.
 - This location should be accessible 24 hours a day and seven days a week.
 - If possible, teams should select a location that provides storage for NYC CERT supplies.
 - Members reporting to the assembly point must bring their response bag, uniform, and NYC CERT ID.
 - A NYC CERT lead must be appointed. He/she will then organize the team based on the strengths and skills of those who are available for deployment.
 - Use the ICS 201 form to organize the group and begin to assign ICS roles (See Appendices for form).

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Functional Responsibilities for Team Organization

- These are the five basic positions that should be assigned by the NYC CERT lead during assembly.
- The NYC CERT lead fills the Command role and determines the organizational structure of the team.
- The operations lead will implement the tactical objectives of the NYC CERT lead and provide a communication link from the scene to the CERT lead.
- The logistics lead will determine the resources available and inform the NYC CERT lead so he/she can adjust his strategy based on the equipment at hand.
- The recorder will operate in conjunction with the NYC CERT lead and document the incoming information. He/she must constantly update the information and support the NYC CERT lead during the transfer of command.
- The staging lead will manage the excess resources that are not required for the initial operation. He/she will stage members so that they are a reasonable distance from the scene and sheltered from the environment.

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Notify OEM.

Assemble your team.

Organize your team.

Now you are a resource.

- Only when a team has completed the above requirements can it be considered a resource.
- Taking the time to properly organize the team places its members in manageable groups with one leader. Once these groups are organized they can be used in many ways and always maintain organization and proper span of control.
- The team is now ready for an assignment!

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On-Scene Protocol

- OEM may deploy CERT members as a team or as a general, all-hands response.
 - If it is a team deployment, the team will travel as a group to the incident.
- Members should assess what is the best type of transportation for the incident.
- Members should respond wearing full NYC CERT protective gear and their ID card so they will be recognized by the City's first responders.

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First Responders on Scene

CERT reports to the staging area.

CERT Lead reports to: OEM Citywide Interagency Coordinator (CIC)

or Established incident command post.

CERT Lead calls into Watch Command.

CERT performs assigned tasks.

CERT Lead updates Watch Command as necessary.

- If professional first responders are on the scene, team members will be directed to report to the staging area.
- The NYC CERT lead will report to OEM citywide incident coordinator or the established command post.
- The NYC CERT lead will report the size of his/her team and their availability for assignment.
- The NYC CERT lead will remain at the command post unless instructed otherwise.
- The NYC CERT lead must ensure that tasks assigned are within the training and capability of the team.

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No First Responders on Scene

Perform size-up by:

Determining if the scene is safe.

Are we within the scope of our training?

Do we have adequate resources?

Other hazards present?

Perform risk / benefit analysis.

Establish priorities / responsibilities.

- If the NYC CERT members are first on the scene they must determine if the scene is safe.
- Team members should remain at a safe location while the scene is assessed by the NYC CERT lead and operations lead.
- Once it is determined that the scene is safe the NYC CERT lead must assess the situation and determine if the incident is within the training and capabilities of the team.
- If the answer to the above questions is NO then the NYC CERT lead should gather data to report back to OEM and establish perimeter control from a position of safety.

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No First Responders on Scene

Upon completion of size-up:
Establish incident command post.
CERT Lead reports back to Watch Command.
Update 911, if necessary.
Act per your training within CERT protocols.
Safety is number 1!

- Command post should be established in a clean and safe environment and be recognizable to incoming units.
- Once the CERT command post is established the NYC CERT lead will contact OEM Watch Command and provide an on-scene assessment of the incident.
- The NYC CERT lead should remain at the command post for the duration of the incident or until relieved by another agency.
- NYC CERT members should always operate within the scope of their training.

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Transfer of Command

CERT Lead will transfer command to first responders upon their arrival on scene. That's how YOU fit in!

- The NYC CERT lead should always be prepared for the transfer of command to the next responding agency since it may arrive at any time.
- With the assistance of the recorder, he/she should maintain an up-to-date list of actions taken, including: tasks completed, number of victims, condition of victims, location of victims, street closures, etc. so the incoming units can adjust their strategy.
- If information is not forthcoming it is incumbent on the NYC CERT lead to prompt his operations section or group leaders to constantly report the progress of their tasks so the lead can adjust tactics and report accurate information to the incoming agency.
- The NYC CERT lead should have two copies of this information so one can be turned over to the incoming agency and one can be used to document the incident.

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Questions?

LESSONS LEARNED

- NYC CERT program and its mission.
- Ready NY
- What the next 10 weeks will focus on.
- Understand ICS and the NYC CERT deployment protocol.

NYC CERT IN ACTION

To recap, below are some of the activities that CERT may engage in on a regular basis:

- Giving Ready New York presentations
- Building Community Disaster Networks
- Practicing in drills and exercises
- Attending Advanced Trainings
- Deploying to incidents and planned events.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message you might stress, learned this week, during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

The Incident Command System must be used to successfully address the situations you will face at the disaster simulation. Please make sure you understand the different sections and their responsibilities. If you have questions, please ask your instructors. You can also complete the FEMA online course, IS-100a, Introduction to Incident Command System, at <http://training.fema.gov/>.

UNIT RESOURCES

- NYC CERT Website: www.nyc.gov/cert
- NYC CERT Digital Newsletter: <http://nyccert.tumblr.com>
- IS-100a, Introduction to Incident Command System, at <http://training.fema.gov/>
- Appendix: Things Your NYC CERT Team Can Do

Appendix: Things Your NYC CERT Team Can Do

1) Disaster Planning: Get Your Team Ready!

To get started thinking about your team's emergency plan, use this checklist as a guide. Take a few minutes to think about the various elements of the plan and throughout the next few weeks and after graduation begin to work together with your team to develop the plan.

- ☐ Practice your telephone tree or other communication system to keep in touch with your members in case of a disaster.
- ☐ Designate a pre-arranged place (staging area) to meet in the event of an emergency.
- ☐ Introduce yourself to local emergency service workers – police precincts & fire houses – and talk with them about your ability to assist in the event of a disaster (reference the identified role appendix in the NYC CERT SOPs).
- ☐ Understand your community; create a Community Disaster Network (details below) that includes addresses and contact information of local emergency, community services, or other important community contacts.

2) Engage In Ongoing Training

Emergency preparedness, response, and recovery training does not end when you have completed your primary NYC CERT training. In fact, it is just the beginning.

It is important to continue to exercise and refresh the skills you have learned during your NYC CERT training. You can do so by:

- Taking NYC CERT Advanced Training classes.
- Completing on-line emergency management training.
- Visiting emergency management websites and reading updated information.
- Using existing teams as mentors to discuss their successes and challenges.
- Developing, coordinating, and executing table top and field exercises.
- Using regular team meetings to review these lessons and refresh your NYC CERT skills.
- Working with OEM's team development specialists to access additional citywide training opportunities.

For your personal preparedness, you are encouraged to become certified in CPR, AED, first aid, and advanced first aid courses through the American Red Cross, American Heart Association, and other similar organizations.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
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3) Team Resource Manual:

The following details a suggested format for developing a team resource manual. This should be kept in one place for the use of the entire team.

Chapter	Title	Description
1	Community Disaster Network (CDN - <i>more details found in Urban Environment III</i>)	Provide lists of government and private or nonprofit agencies, community-based organizations, and businesses with contact names and phone numbers.
2	Pre-disaster Risk Assessments	Describe in this chapter which disasters your community will likely face. Arrange the descriptions beginning with the worst case disaster for which this plan is being written.
3	Team Management Plan	This chapter specifies your team's organizational structure. It defines the duties of each team officer when responding to a disaster. You should also include descriptions for additional team officer positions (ie public relations, mass care) if they are part of your team's organization. Also include shift schedules in terms of duty hours that should be implemented.
4	Mobilization	Describes how the team will be mobilized and where the team will assemble.
5	Cache Sites & Resources	This chapter should identify cache locations, inventories of current equipment and supplies, and a current list of resources available from community members and contacts.
6	Search and Rescue Operations	This lists your community's vulnerable areas and their priority. For example, there may be a school and a senior care center. If the school has a more comprehensive disaster plan, the center may become first priority.
7	Communications Plan	Describes your team's communications plan. It should include your team members' contact information and roster. Details should include your team's call-down method. It should include radios and frequencies if those would be used.
8	Evacuation Routes	Describes the routes of evacuation out of the community and to local hurricane evacuation centers if your team operates in a coastal storm evacuation zone.
9	Special Operations & Procedures	Describe here any special operations your team may have planned or specialized skills that you may have developed.

Chapter One

Community Disaster Networks: Begin by compiling a list of local government and private or nonprofit agencies with contact names and phone numbers and brief descriptions of available resources or services. These are the people that your team can contact during a response to secure special services for your neighbors. For example:

- After School Programs
- American Red Cross Chapters
- Block and Tenant Associations
- Business Improvements Districts
- Faith Based Contacts (Houses of Worship and Community Centers)
- Civic Associations/Clubs
- NYPD Precinct Contacts
- Senior Centers
- YM-YWCA/YM-YWHA
- Big Box Stores (Ikea, Target, etc.)

Chapter Two

The second chapter of your plan is a risk assessment for your neighborhood or community. This chapter describes the various types of disaster that your community is likely to face in the order of most to least severe or frequent. Please visit www.nyc.gov/hazards for more information about NYC-specific hazards. Your plan should be written to address all disaster types and describe them in a prioritized manner, which will help you focus on the other activities of the team, such as cache development. Once you have defined the risks, you can begin developing "wish lists" that your team can procure over time.

Chapter Three

The third chapter describes the team organization or structure. It contains a description of the various leadership positions in the team and their duties during a response. For example, logistics section chief is responsible for gathering resources (such as personnel) in the staging area and distributing them as needed. Determine what forms need to be filled out pre-and post-activation. When a team does activate, who is reasonable to maintain communication with OEM? This chapter should also contain descriptions of each member's availability.

Chapter Four

The fourth chapter describes how the team will be mobilized and where the team will assemble. Please outline your call down procedure and staging areas. These should include backup sites in case your primary location is inaccessible.

Chapter Five

The fifth chapter describes the location and resources available to your NYC OEM CERT Team. This should include lists of other resources offered or volunteered by your community. Please note: these resources should include not only equipment and supplies, but a more detailed description of community resources based on CDN contacts listed in Chapter 1. For example, a local community group has offered to assist your team and has a large community room that could be used for triage, a reception site, etc, in time of emergency.

Chapters Six

Conduct a survey of your community's vulnerable areas. Take note of areas that flood regularly, are in a hurricane evacuation zone, and/or have a higher prevalence of fire or other such emergencies. Note vulnerable locations such as schools and senior care centers within these areas and encourage them to review their disaster plans. Make a priority list for your NYC OEM CERT Team of places that should be contacted first in event of emergency. For example, if the school has a more comprehensive disaster plan than a local senior center, the center may be a higher priority.

Chapter Seven

Use this section to describe your team's communications plan. Each team should have several methods of contacting each other and putting their members on standby. This section should include your team member contact information and current roster, detailed instructions of how to do each of your call-down methods, and availability of the team to respond during events happening during the daytime and evening hours. Some teams have access to radios. If this is the case with your team you should include what radios and frequencies would be used in event of emergencies.

Chapter Eight

Chapter Eight should list the various routes which the community might use to evacuate. Check OEM's Hurricane Zone Finder to determine if your area is in a Hurricane Evacuation Zone, and be sure to note Hurricane Evacuation Centers in your Community District.

Chapter Nine

Chapter Nine is where you define any special capabilities of your team as your team develops and takes further training. Use this section to note people who are more specialized in the types of activities that NYC OEM CERT may be used for in time of emergencies.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL FOR VISUALLY IMPAIRED USERS

UNIT 2: URBAN 1

UNIT INTRODUCTION

The New York City landscape encompasses more high-rise buildings than any other city in the United States. We live in a vertical city both above and below street level. This presents unique challenges to residents, first responders and to NYC CERT members.

In this unit we will discuss potential roles for NYC CERT in high-rise fires and utility emergencies. A high-rise building is defined as more than seven stories or 75 feet. Having a clear understanding of NYC CERT roles within the New York City emergency response system is critical to the safety of everyone involved. Strict adherence to the NYC CERT response protocols is mandatory. While not all emergencies will result in a NYC CERT deployment, a trained member may be of great assistance to his or her family and/or fellow occupants and first responders.

One of the major challenges encountered during fires and emergencies in high-rise buildings is how to move people up and down safely. This includes evacuating occupants at the same time that first responders are moving into a position to fight the fire or mitigate the emergency. In this unit, we will discuss evacuation and elevator protocols as well as the concept of sheltering in place. Additionally, we will discuss the importance of confining the fire and how actions as simple as closing the door can aid in limiting the spread of fire and smoke. Far too many times, occupants have become victims as a result of the choices they make due to a lack of awareness and understanding.

We will also identify the most common power and utility emergencies encountered within New York City's urban environment. These include overhead and underground electrical emergencies, steam emergencies, natural gas and carbon monoxide emergencies and the hazards that are associated with each.

UNIT OBJECTIVES

- Discuss actions at a high-rise building fire.
- Describe the role of a NYC CERT during utility emergencies.
- Raise your own personal awareness to high-rises and utility emergencies.
- Participate in a scenario-based discussion.

UNIT REVIEW

When thinking about and discussing the knowledge applications at the end of this unit, remember the structure of ICS. When learning about fires and evacuations, think about ICS and how it relates to first responders and CERT during an emergency.

LOOKING FORWARD

Next week you will learn about the unique aspects of transportation in New York City. The subway systems, tunnels, and bridges make living in NYC an adventure and challenge. Knowing what to look for and how you can help in the event of an emergency may come in handy during an emergency.

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Urban High-Rise Building Emergencies and Utility Emergencies: Urban Environment 1

- The intent of this unit is to familiarize students with high-rise building and utility emergencies found in NYC's urban environment.
- We will also instruct students on high-rise safety during a non-CERT response as well as possible CERT roles during utility emergencies.

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Unit Objectives

Discuss actions at a high-rise building fire.
Describe the role of CERT during utility emergencies.
Participate in a scenario-based discussion.

- By the end of this unit you should be able to:
 - Consider possible actions during a high-rise emergency.
 - Understand the role of a CERT during a utility emergency.
 - Be able to participate in a scenario-based discussion and make decisions based on your training.

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FOR VISUALLY IMPAIRED USERS

Universal Considerations

Ensure personal and team safety.

Raise personal awareness of your environment.

Reduce panic and confusion.

- Personal and team safety is the primary concern of all CERT members.
- Raising personal awareness of their environment allows CERT members to better understand their communities and specific hazards present in their areas.
- Panic and confusion are dramatically reduced by:
 - Providing an organized, uniformed presence;
 - Establishing a plan and executing it; and
 - Giving clear instructions to those impacted by the emergency.
- Always maintain good communication between CERT members and responders.
- Poor communication leads to:
 - Duplication of effort;
 - Inefficient use of resources; and
 - Conflict and confusion.

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HIGH-RISE APARTMENT BUILDINGS

- This section will discuss the specific characteristics of a high-rise apartment building.
- We will discuss possible roles during a fire in a high-rise apartment building.

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Fire in a Residential Building

- CERTs should never operate on any floors above the fire.
- Due to the rapidly changing conditions involved in a fire, heat and smoke travel upward quickly, making the floors above the fire extremely dangerous.
- The safest location for any occupant during a high-rise fire is in his or her apartment unless the apartment is directly involved in a fire.
- Self evacuation could result in serious harm.

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Fire in Your Apartment

Call 911

Do not attempt to extinguish if other than a minor fire (i.e. trash can).

Get out as quickly as possible.

Close doors behind you; do not lock them!

Go to your pre-determined meeting place at least two floors below the fire.

- Immediately call 911 to tell the FDNY the exact location of the fire.
- Fires larger than a wastebasket may exceed the capability of a fire extinguisher and the scope of CERT training.
- Always operate a fire extinguisher between the fire and the primary exit.
- Close the door to limit the oxygen in the room and slow the spread of the fire.
- Remember the Ready New York video; use your pre-determined meeting place. This allows occupants to quickly determine if everyone escaped and notify incoming first responders of anyone who may be missing.

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Fire Not in Your Apartment

Call 911.

Remain in your apartment.

Prevent smoke and heat from entering your apartment by sealing doors and vents.

Do not break windows.

- Immediately call 911 to inform the FDNY the exact location of the fire.
- Construction features of high-rise buildings will limit the spread of fire from the involved apartment.
- Common duct work for heating and ventilation may allow smoke to enter your apartment.
- Sealing ducts and doorways will limit the amount of smoke entering your apartment.
- If there is no heavy fire or smoke below your window, open it slightly to establish a positive pressure within your apartment thereby limiting the amount of smoke.
- Once a window is broken, it cannot be closed. Changing fire conditions could allow fire to extend into your apartment via the window.

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HIGH-RISE OFFICE BUILDINGS

- This section will discuss the specific characteristics of a high-rise office building.
- We will also discuss possible CERT roles and individual roles during a fire in a high-rise office building.

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Fire Command Station

Located in the lobby of an office building or near the entrance and/or elevators at hotels.
Main component is a flashing FIRE signal that indicates activation of an alarm at the console.

- The fire command station will provide information about the status of the building systems including the:
 - Heating, Ventilation and Air Conditioning Equipment (HVAC)
 - Elevators
 - Smoke Detectors
- The fire command station will provide two way communications with floor wardens.
- The fire safety director should be located at the fire command station.
- The fire command station is capable of making announcements via a public address system in the elevators, stairwells and on each floor.

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Fire Alarm Systems

Systems:

Are equipped with public address system with speakers on each floor, elevator and stairwell.

May be connected to a central station that notifies the FDNY.

Manual fire alarm pull stations installed at each corridor leading to the exits.

- Activating a manual pull station will send a message to the fire command station.
- Pull stations with a diagonal white stripe indicate the alarm is connected to a central station that notifies the FDNY when the system is activated.
- Immediately after activating any pull station, a follow up call to 911 should be made to provide specific information to the responding units, including:
 - Location of the fire emergency (address, floor, wing)
 - Type of incident (fire, emergency, other)
 - Status of evacuation (stairwell used, sheltering in place)

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Floor Warden Stations

Stations are located on each floor between stairways or exits.
Emergency telephones connect to the Fire Command Station.

- Floor warden stations are placed between exits ensuring that evacuating occupants will pass a station while exiting the floor.
- The emergency phone provides direct contact with the fire command station.
- Floor wardens will use emergency phones to obtain evacuation instructions from the fire safety director.
- In the absence of a floor warden, the phone located at the floor warden station can be used to contact the fire command station to receive evacuation instructions.

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If You See or Smell Smoke

Notify FDNY and building fire safety team by activating a manual pull station and calling 911.
Contact the Fire Command Station using the warden phone to explain the conditions on the floor –
smoke, fire, etc.

- Immediate notification via the pull station and 911 will ensure a rapid response by FDNY units.
- Unless you are located on the fire floor, await instructions from the floor warden, fire safety director, or FDNY at the fire command station. Avoid entering the stairwell as you may hamper response operations or put yourself or others in a more dangerous situation.
- The Fire Department will designate an attack stairwell used to extinguish the fire.
 - Entering this stairwell will expose you to high heat and heavy smoke.
- The Fire Department will also designate an evacuation stairwell if it is determined that an evacuation is required.

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If You Hear a Fire Alarm

Immediately stop what you are doing and listen for instruction over the public address system. If you are told to leave, proceed to the evacuation locations on your floor.

- Floor wardens and fire safety directors use the public address (PA) systems to inform occupants of the status of the emergency and whether an evacuation is required.
- Specific instructions such as whether to evacuate, which stairwell will be used for evacuation, and which elevators are safe to use will be announced over the PA system.

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General Rules for Evacuation

Close (but do not lock) the door behind you.

Check the stairwell for smoke and heat prior to exiting.

Do not try to escape via the roof.

Do not break windows.

- Closing the door closest to the fire area will help to contain the fire.
- As you evacuate, close each door you pass through to limit the spread of smoke and flames.
- Always check each door prior to opening:
 - Feel above the middle of the door with the back of your hand prior to opening.
 - If you see smoke or feel heat, **immediately** close the door and check for another approved stairwell.
- **Do not** evacuate to the roof. Evacuating to the roof places you above the fire and further from incoming rescuers with limited, if any, means of escape.
- Breaking windows could fuel the fire with oxygen and enhance the rapid spread of the fire.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

General Rules for Evacuation

Do Not Use Elevators

- Unless instructed to do so by the floor warden or fire safety director, ***never*** use an elevator during a fire.
- Water, heat and smoke can cause elevators to act erratically.
- The elevator shaft acts as a chimney and may cause the car to quickly fill with smoke.
- Elevators may stop on the fire floor and open to a wall of smoke or fire.
- Elevators may be recalled to the lobby and put out of service to eliminate the possibility of an occupant entering the elevator during a fire.

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During Hurricane Sandy

Many high-rises lost power, heat, and water.

CERTs: Conducted building checks to provide food, water and supplies to homebound residents.
Reported to DOHMH and Home-based Healthcare Alliance on condition of patients whom nurses could not reach.

- Hurricane Sandy expanded the role that CERTs played in utility emergencies.

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FOR VISUALLY IMPAIRED USERS

POWER & UTILITY EMERGENCIES

- This section will cover utility emergencies common to the urban environment.
- We will also discuss CERTs' role during a utility emergency.

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FOR VISUALLY IMPAIRED USERS

Four Types of Utility Emergencies

Electrical
Steam
Natural Gas
Carbon Monoxide

- These are four types of utility emergencies in which a CERT team may be activated.
- Each emergency is unique and CERTs must recognize the hazards associated with each one.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

UNDERGROUND ELECTRICAL EMERGENCIES

- This section will cover the warning signs of underground electrical problems and the dangers of these types of emergencies.
- This information will act as a guide for what you can do as a CERT member at an underground electrical emergency.

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FOR VISUALLY IMPAIRED USERS

Manholes / Transformers

They are interconnected by electrical conduits.

Covers may become airborne.

Smoke / heat may travel to adjacent manholes, buildings, traffic boxes, lamp poles.

Consider the presence of carbon monoxide.

- Manholes are used as access points to the underground system. Manhole covers may become pressurized causing them to blow as high as several stories.
- Smoke and carbon monoxide (CO) can travel via the manhole and conduits and can enter the building through the electrical piping.
- CERT members should consider that all the surrounding manholes and buildings may be affected.
- At a CO emergency, CERT members should never go below grade (i.e. basement or cellar).
- CERT members can assist by determining the number of buildings affected by:
 - Questioning tenants if they are experiencing electrical problems;
 - Inquiring if their carbon monoxide meter has been activated.

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FOR VISUALLY IMPAIRED USERS

Underground Transformer Vault

- Transformers either increase or decrease electrical current so it can be delivered to residential and commercial customers.
- Underground transformers can be found on the sidewalk or in the street.
- They are usually indicated by the rectangular cover.
- Covers may be slotted or solid.
- CERT members should not operate within close proximity of a transformer vault.
- Transformers are filled with dielectric fluid that is toxic when it burns.

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FOR VISUALLY IMPAIRED USERS

Manhole / Transformer

- Manhole/transformer covers can explode without warning sending the cover into the air.
- Toxic smoke and flames are usually associated with the explosion.
- It is not necessary for CERT members to approach the manhole/transformer to establish a danger zone.
- Post caution tape or rope at waist to chest level to prevent onlookers from entering.
- Position CERT members around the perimeter to act as a uniformed presence, restricting entry and informing the public of the dangers of the incident. As always, CERT members should work in pairs.

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FOR VISUALLY IMPAIRED USERS

Manhole Explosion

- A transformer vault explosion can deliver enough force to overturn a parked car.
- Salt used to melt ice can deteriorate the insulation of the wires.
- As the insulation fails, the wires can connect when they touch causing a fire.
- Explosions are usually caused by a large buildup of CO within the piping or manhole.
- When CO reaches 12,500 parts per million, it enters its flammable range and can explode with great force when confined within a small area such as a conduit, manhole or transformer vault.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

OVERHEAD ELECTRICAL EMERGENCIES

- This section will discuss the dangers of overhead electrical emergencies
- Overhead electrical power can be found throughout New York City except in Manhattan.
- This information will act as a guide for what you can do as a CERT member at an overhead electrical emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Danger of Light Poles

- Light poles receive power from the underground electrical system.
- The conduit for the electrical wires can allow smoke and CO to build up inside the light pole and traffic box.
- Sparks caused by faulty connections within the light pole can ignite the accumulated CO causing an explosion.
- The light pole should be considered part of the danger zone when cordoning off an area.
- CERT members should close the sidewalk restricting pedestrian traffic in the area of the light pole.

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FOR VISUALLY IMPAIRED USERS

Overhead Power Lines

There are overhead power lines in four of the five boroughs.

Light poles may contain overhead transformers.

Avoid all downed wires; some may be live.

- Power lines contain high voltage electricity.
- Electricity from power lines can jump and electrocute someone who does not come in direct contact with the wire.
- Never operate in close proximity of a downed wire.
- Overhead wires can remain live even though they are broken.
- Downed wires can energize the ground close to where they lie.
- CERT members should tape or rope off the area and assess the surrounding buildings to determine the extent of the emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Overhead Power Lines:
The Hazards of Live Wires

- Electricity can travel long distances via a conductor.
- Even wood can conduct high voltage electricity.
- Chain link fencing can carry the electrical current the entire length of the fence.
- If an automobile comes in contact with a downed wire the entire vehicle becomes energized.
 - Instruct the passengers to remain in the vehicle and move towards the center of the car without touching sides or roof.
- CERT members should recognize potential conduits for the electrical current and include that area in the danger zone.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

INDOOR STEAM EMERGENCIES

- This section will discuss indoor steam emergencies.
- Indoor steam emergencies usually involve either defective boilers and broken pipes or radiators.
- This information will act as a guide for what you can do as a CERT member at an indoor steam emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Indoor Steam

Uncontrolled steam is as dangerous as a fire.

If steam is leaking from a radiator, turn the knob to the right to shut off.

- Steam expands to 1,600 times the volume of water.
- Its rapid expansion allows superheated gas to fill a room quickly.
- Steam can burn your skin the same way as fire would.
- The simplest steam emergency to mitigate is a leaking radiator. This can be controlled by turning off the radiator valve.
- If you are unable to control the leak at the radiator, call 911.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Indoor Steam

If you are unable to control a steam leak at the radiator:

Notify the fire department (call 911).

Shut down the boiler / furnace (red switch plate).

Tape or rope off the area for safety.

- If you are unable to control the leak at the radiator, call 911 and control access to the danger area by taping or roping off the affected the area.
- If you have access, turn off the boiler using the remote switch located at the top of the stairs or outside the boiler room.
 - This switch usually has a red switch plate.
 - Allow the residual steam to release prior to entering the room.
- Large scale indoor steam emergencies may require the entire building to be shut down leaving occupants without heat. This may become a possible CERT response to assist in the temporary relocation of residents.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

OUTDOOR STEAM EMERGENCIES

- This section will discuss outdoor steam emergencies.
- As the infrastructure in New York City continues to deteriorate due to age, these emergencies are becoming more frequent.
- This information will act as a guide for what you can do as a CERT member at an outdoor steam emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Outdoor Steam Explosion

NYC – July 18, 2007

- Existing underground steam pipes are usually wrapped in asbestos.
- CERT members should always assume an asbestos release when underground piping is ruptured.
- Asbestos can travel great distances once it is airborne. CERT members should consider the wind direction when establishing their safety zone and should always operate upwind.
- While high pressure steam can be invisible, another warning sign will be an extraordinarily loud roar, similar to a jet engine.

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FOR VISUALLY IMPAIRED USERS

Outdoor Steam Explosion NYC
July 18, 2007 (Continued)

- The illustrations above depict the magnitude of a high pressure steam explosion.
- Steam and debris may shoot up to 15 stories.
- The force of the explosion will undermine the street surrounding the ruptured pipe.
- Debris from the explosion can travel great distances and strike victims.
- Motorists who abandon their vehicles will cause major traffic problems which will delay first responders.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Outdoor Steam

Notify FDNY via 911 immediately.

Notify OEM Watch Command and follow response protocol.

Possible actions:

Rope or tape off the area for safety.

Avoid breathing in the contaminated air.

Evacuate the area as far away as possible.

- Immediate notification to 911 will provide an on-scene report to the dispatcher to inform incoming first responders.
- CERT members should notify their team chief who will notify Watch Command and determine if a CERT response is required.
- From a safe location (i.e. uphill, upwind, upstream) CERT members may:
 - Be tasked to assist in traffic control. CERT members should remember the importance of establishing a lane for emergency vehicles.
 - Keep onlookers away from the scene to prevent exposure to the asbestos. This can best be accomplished by using caution tape or rope.
- Victims who have been exposed to airborne contaminants should remain on scene for evaluation and possible decontamination.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Natural Gas Emergencies

- This section will discuss natural gas emergencies.
- Natural gas emergencies can occur indoors or outdoors.
- This information will act as a guide for what you can do as a CERT member at a natural gas emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Natural Gas Emergencies: Continued

- A natural gas leak can result in the accumulation of gas inside a building to the point that it may reach its explosive range.
 - The explosive range of natural gas is 5% to 15% of the total atmosphere.
- Without a combustible gas meter, it is impossible to detect the amount of gas in the atmosphere.
- A gas explosion can weaken the structural integrity of the building and may even cause a total collapse.
- No CERT member should operate in a gaseous atmosphere.
- When the presence of a gas odor is detected, immediately notify 911 with the location of the leak and the type of occupancy involved.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Gas Appliances Shut Off

Turn valve $\frac{1}{4}$ turn.

Turn valve perpendicular to piping.

Some valves may not have stops.

- Gas flow may be stopped by turning the valve perpendicular to the pipe, usually a quarter turn.
- Some valves may not have stops and turning the valve beyond a quarter turn may reopen the valve.
- The valve is usually located close to the appliance it feeds.
- **Once gas has been shut down, it must be restored by the utility company.**

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Gas Meter Shut Off

Turn valve $\frac{1}{4}$ turn.

The meter is perpendicular to the piping.

Shut off is the last point of control.

Never turn the gas back on yourself.

Only a utility worker should restore gas service.

- The gas meter usually requires a quarter turn to close.
- Turn valve perpendicular to the piping.
- This is the last point of control for a gas leak within the building.
- Anytime a gas valve is shut down the utility company should be notified.
- CERTs role at a natural gas leak may be limited to taping off the area and restricting people from entering the affected building.
- **Once gas has been shut down, it must be restored by the utility company.**

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Carbon Monoxide

- This section will discuss the dangers of carbon monoxide (CO).
- This information will act as a guide for what you can do as a CERT member at a CO emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Carbon Monoxide (CO)

Colorless, odorless, tasteless, non-irritating, toxic gas.

Natural by-product of incomplete combustion.

No early warning signs – can kill before its presence is known.

- CO is undetectable without meters/detectors.
- Since it is a byproduct of incomplete combustion, it can be found any place a fossil fuel (oil, gas, and diesel) is burned.
- Some sources of CO are defective stoves, defective boilers, defective chimneys, kerosene space heaters, gas generators and transformer fires.
- Since CO is undetectable by human senses its effects may be undetectable until they reach dangerous levels.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Effects of CO Exposure in Parts Per Million (PPM)

200 PPM + 120 minutes = Flu Like symptoms

800 PPM + 45 minutes = Flu Like symptoms

800 PPM + 180 minutes = Death

1600 PPM + 60 minutes = Death

3200 PPM + 10 minutes = Death

3200 PPM + 30 minutes = Flu Like symptoms

12,800 PPM + 1-2 minutes = Death

- Effects of CO are based on exposure levels and length of exposure.
- Flu-like symptoms are an early warning sign to carbon monoxide poisoning.
- Exposure to 12,500 part per million can cause death in 1-3 minutes.
- If any CERT member experiences the warning signs of carbon monoxide he or she must immediately seek medical attention.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

CO Emergencies

All NYC residences are required by law to have smoke and CO detectors.

Change the batteries twice a year when we change our clocks.

Never remove the batteries for other uses.

Average lifespan of a CO detector is seven years.

- All residences within NYC must have a CO detector.
- Batteries for the CO detector should be changed twice a year when we adjust the clocks for daylight savings.
- Detectors indicate the presence of CO while digital meters detect the amount of CO in parts per million.
- CERT members should be able to recognize the early warning signs of CO poisoning.
- If safe, and the source (i.e. car, boiler, stove) of the CO is obvious, shut it down.
- If victims experience symptoms, they should move themselves to a safe area and remain on scene until they receive medical attention.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Unit Review Questions

1. Where is the safest location during a high rise residential fire?
2. What are the early warning signs of CO poisoning?
3. How do we control a gas leak on a defective stove?
4. When do we use elevators at a high rise fire?
5. What contaminate would you expect to find in an underground steam explosion?

Key Points

- The safest location at a high-rise residential fire is inside your apartment as long as it is not the source of the fire.
- Early warning signs of CO will appear as flu-like symptoms.
- A gas leak on a defective stove should be closed as close to the leak as possible – most stoves have a shut off directly behind the stove. If you are unable to control it at the valve the meter may have to be closed.
- Unless instructed to do so by the fire safety director or the floor warden, **NEVER** use an elevator at a high-rise fire.
- The most common contaminant found at an underground steam explosion is asbestos since most underground piping is wrapped in asbestos.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

LESSONS LEARNED

- Actions at a high-rise building fire and/or evacuation.
- Utility emergencies and awareness.
- Roles CERT may play during these emergencies.

NYC CERT IN ACTION

To recap, during a utility disruption, or water main break, CERT can:

- Assist with checking on people with special needs.
- Assist with food and/or water distribution and sheltering.
- Assist with local evacuations.
- Assist with community outreach and information dissemination.
- Assist in perimeter and traffic and crowd management.
- Work with NYPD to assist in retrieving personal items.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message learned in this unit that you might stress in a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

Use the knowledge about evacuations and utility awareness to prepare for the disaster simulation. How did you create an ICS structure for the knowledge applications this week?

UNIT RESOURCES

NYC OEM Website: www.nyc.gov/oem

FDNY Fire Zone website (community link): <http://www.fdneyfirezone.org/>

ConEdison website: <http://www.coned.com/>

National Grid/KeySpan website: <http://www.nationalgridus.com/>

Carbon monoxide poisoning prevention guidelines: <http://www.cdc.gov/co/guidelines.htm>

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL FOR VISUALLY IMPAIRED USERS

UNIT 2: URBAN 2

UNIT INTRODUCTION

The New York City Transit System is one of the most extensive and complex public transportation systems in the world. With 24-hour-a-day bus and subway service throughout the five boroughs, the MTA system moves more than six million people a day and over 2.4 billion people a year. This is the equivalent of roughly one-third the nation's mass transit users. New York City is also home to more than 2,000 bridges and tunnels which, on a daily basis, permit hundreds of thousands of vehicles to travel in and out of the five boroughs and New Jersey. Recently water travel has once again become a very attractive option to combat the congestion on the subways, bridges, and tunnels. At any given time there can be more than 60,000 passengers traveling on the New York City waterways.

The complexity of the New York City transportation system reinforces the fact that the NYC CERT member's urban environment is unlike any other. NYC CERT members need to be aware of the hazards associated with each manner of travel described above. A trained NYC CERT member with a basic understanding of the types of emergencies which can take place in the transit system may be able to provide leadership and assistance until first responders arrive.

This unit will discuss the various hazards and emergencies which may be encountered throughout the different transportation systems and how many of these hazards may be minimized or mitigated. Some points to be considered during all emergencies are evacuation procedures, reducing panic and confusion, and communicating with first responders. During all emergencies, it is important that NYC CERT members be aware of the limitations of their training and to understand that no NYC CERT member may act outside the scope of his or her training. The most critical point to keep in mind is that personal and team safety should always be a NYC CERT member's first priority.

UNIT OBJECTIVES

- Develop an understanding of the NYC transportation system.
- Understand personal and team safety at a transportation incident.
- Develop possible actions for NYC CERT at a transportation incident.

UNIT REVIEW

ICS will continue to play a part in every unit you learn. Transportation emergencies will require a similar ICS response as high-rise building evacuations and utility emergencies. CERT roles are also similar, as your heightened awareness as a resident of New York City makes you an asset to your neighbors, co-workers, and people riding the same subway car.

LOOKING FORWARD

Next week you will learn the human services side to disaster preparedness, response, and recovery. You will learn the basics of starting your team's Community Disaster Network and building the relationships within your community that will help hold it together in the event of an emergency or disaster.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Transportation: Urban Environment 2

- The intent of this unit is to familiarize participants with the various transportation systems in the New York City metropolitan area.
- Participants will also be instructed on transportation safety and possible NYC CERT roles during a transportation emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Transportation Objectives

Develop an understanding of the NYC transport system.
Understand personal and team safety at a transportation incident.
Develop possible actions for CERT at a transportation incident.

- By the end of this unit you should be able to:
 - Consider possible actions during a transportation emergency;
 - Understand the role of a NYC CERT during a transportation emergency; and
 - Be able to participate in a scenario-based discussion and make decisions based on your training.

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FOR VISUALLY IMPAIRED USERS

Universal Considerations

Personal and team safety

Proper notification: 911 and OEM Watch Command

Raise personal awareness of your environment

Reduce panic and confusion

Communicate with team members and emergency responders

- Personal and team safety is the primary concern of all NYC CERT members.
- Raising personal awareness of their environment allows CERT members to better understand the specific hazards within their community.
- Panic and confusion are dramatically reduced by:
 - Providing an organized uniformed presence;
 - Establishing and executing a plan; and
 - Giving clear instructions to those impacted by the emergency.
- Always maintain good communication between NYC CERT members and responders.
- Poor communication leads to:
 - Duplication of effort;
 - Inefficient use of resources; and
 - Conflict and confusion.

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FOR VISUALLY IMPAIRED USERS

Subways

- This section will discuss the specific characteristics of the NYC subway system and possible non-NYC CERT actions during a subway emergency.
- We will also discuss possible NYC CERT roles during a subway emergency.
- The information received in this unit will better prepare NYC CERT members in the event that an incident occurs while traveling on the subway.

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FOR VISUALLY IMPAIRED USERS

Subways: New York City Subway Map

- This illustration depicts the size and complexity of the NYC subway system.
- All NYC CERT members should be familiar with the characteristics of the subway in your area, including:
 - Entrances and exits;
 - Token booth stations and hours of operation;
 - Emergency exits; and
 - Train designations and the direction of travel.

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FOR VISUALLY IMPAIRED USERS

CERT Role in Subway Emergencies

Operate Safely.

Be Familiar with Signage.

Understand MTA Protocols.

Understand CERT Protocols.

- Personal and team safety is the primary concern of all NYC CERT members.
- Prior to any operation within the subway system, NYC CERT members must be familiar with:
 - All subway signage;
 - MTA protocols; and
 - NYC CERT protocols for a subway emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Subway Emergencies

Medical emergencies

Police emergencies

Stalled trains

Evacuations

Fires

- Most subway emergencies are minor in nature and corrected by MTA personnel.
- At large scale subway emergencies, NYC CERT members can support responding agencies by assisting with:
 - Traffic Management
 - Triage
 - Information dissemination
 - Evacuation of passengers
- Unless the nature of the incident is minor and the cause is known, NYC CERT members should not enter the subway system or operate below grade without approval from on-scene personnel.

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FOR VISUALLY IMPAIRED USERS

Subway Emergencies

Contact 911 if possible.

Notify a crew member immediately of the emergency.

Move to another car via interior doors.

Remain inside car – tracks are electrified.

Follow instructions of emergency personnel.

Do NOT pull the Emergency Cord.

- Notifying 911 is the first step in any emergency.
- On-scene information from a trained NYC CERT member provides incoming first responders accurate information to better prepare for the response.
- The conductor is located in the middle of the train.
- The train operator is located at the front of the train.
- If doors between cars are unlocked, instruct passengers to move to another car.
- Unless personal safety is immediately threatened, passengers should remain inside the car.
- Pulling the emergency cord will immediately stop the train. The train can only be restarted by on-scene MTA personnel.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

#1 Train Derailment

May 29, 2013 - #1 Train derailed in Manhattan on 125th Street.

CERT member on board called Watch Command and helped NYPD direct passengers from car to car.

- Always be ready to serve as CERT member wherever you are. Carry your CERT ID with you at all times, if possible.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Terrorism

- The transportation system of any major metropolitan city is a terrorist target.
- Any large scale subway emergency involving fire, explosions and/or derailments may be an indicator of a terrorist incident.
- At the Madrid Bombing, as well as the bombing in London, multiple devices were used at multiple locations and at different times to cause harm to both passengers and first responders.
- NYC CERTs are **NOT** trained to operate at a terrorist incident until the scene is declared safe by on-scene personnel.

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FOR VISUALLY IMPAIRED USERS

Subway Entrances

- Subway entrances use a split-globe lighting system.
- The bottom half of the globe provides lighting to the staircase and is generally white.
- The top half of the globe will be red or green.
- Red globes indicate that there may or may not be a token booth clerk at this location, and the stairway will be closed at some point during a 24-hour day.
- Green globes indicate that the entrance is open 24-hours a day. There may or may not be a token booth clerk at this location. In areas that are not served by a token booth clerk, access will be via a high entrance/exit turnstile or gate which requires a MetroCard.
- For a NYC CERT response, the first point of access should always be at the entrance with the green globe staffed with the token booth clerk.
- NYC CERT members should be familiar with the hours of operation of the subway entrances in their community.

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FOR VISUALLY IMPAIRED USERS

Platform Signage

- All subway platforms display a track identification sign which indicates:
 - The name of the station;
 - The track designation and location;
 - A “You Are Here” indicator;
 - The normal train movement at that location, northbound or southbound; and
 - The direction and distance to the nearest emergency exit and its identification number.
 - If there is not an emergency exit before the next station, then the identification of the next station is listed.
- NYC CERT members should be familiar with the station names and emergency exits in their community.

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FOR VISUALLY IMPAIRED USERS

Blue Light located every 600 feet

- Blue lights are located throughout underground subway tunnels.
- Blue lights are placed approximately 600 feet apart.
- The blue light indicates the approximate location of: a power removal box, telephone and fire extinguisher.

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FOR VISUALLY IMPAIRED USERS

Equipment Located Near the Blue Light

Emergency Phone

Power Removal Switch

Fire Extinguisher

*Equipment may be found opposite the blue light.

- This equipment may be found close to the blue light or directly opposite the blue light.
- This equipment is used by emergency personnel.
- During an emergency, this system can be used to remove power to the third rail and directly contact the MTA Rail Control Center.
- There is also a dry-chemical fire extinguisher available for use by trained personnel at this location.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Power Removal

Open door.

Depress lever.

Contact train master via blue light phone.

*Must contact train master via phone when power is shut off.

- Power can be immediately removed from the third rail by depressing the power removal switch.
- Power will be restored within 20 – 30 seconds by MTA personnel unless the power removal is followed by a call to the MTA Rail Control Center via the emergency phone.
- If contact cannot be made with the MTA Rail Control Center, assume power will be restored as per MTA protocols.
- When power removal switches are out of service, power removal must be requested via the emergency telephone.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Blue Light Phone

How to operate the phone:

Depress call button on handset.

Must be depressed for the duration of the call.

Releasing button disconnects the call.

Dial four-digit number listed on inside of case.

Provides communication with Token Booth, Train master and outside line.

- Phones will be located close to the power removal switch.
- Blue light phones are part of a Centrex system which requires a four digit entry found inside the phone case.
- To remove power, the caller:
 - Must identify himself/herself;
 - State the reason for the power removal;
 - Remain on the phone until confirmation of power removal is received.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Third Rail Safety

- The third rail is located on both sides of the track and changes positions throughout the line.
- The third rail cover is made of wood or plastic. **Never** step on this cover when crossing the third rail.
- Always operate as if power is on and avoid contact or proximity to the third rail and the third rail contact shoes.
- Even with power off, there are elements within the undercarriage electrical system that possess enough voltage to cause a shock.
- Due to the many potential dangers located throughout the system, leaving the subway car and entering the track bed should be a last resort.

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FOR VISUALLY IMPAIRED USERS

Contact Shoe

- Metal contact shoes conduct electricity from the third rail to car motors.
- Contact shoes are located on both sides of the car, front and the rear, in the vicinity of the wheels.
- If any shoe makes contact with the third rail, all contact shoes on the car will be energized.

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FOR VISUALLY IMPAIRED USERS

Track Signage

- Some bench walls provide cuts outs (safety niches) which are indented spaces in the wall of the tunnel.
- The cut outs may provide room for a person to stand while a train passes by.
- The main problem with these areas of refuge is that track workers sometimes use these spaces to store tools and equipment.
- When passing cutouts on a catwalk, observe to see if it is clear. If a train is approaching unexpectedly, always return to the cutout you just passed if it is clear.

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FOR VISUALLY IMPAIRED USERS

Emergency Evacuation Device (EED)

Location of EED:

Underground trains:

First blue light south of southbound platform

Elevated Trains:

Area of token booth

- The Emergency Evacuation Device (EED) is a yellow, seven-foot long device with steps on the front and a flat surface on the backside.
- Each unit is constructed of non-conductive fiberglass and weighs 42 pounds.
- This device can be used for removing passengers from the track bed to the platform.
- Keys to remove EEDs from their mounting brackets are available at every token booth.

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Emergency Exits

- Emergency exits are stairways that lead up to street level from the track area.
- A prism-shaped sign or a cluster of five white lights identifies emergency exits within the subway tunnels.
- The emergency exit door can be found on sidewalks throughout New York City and are painted yellow.
- The door is opened by pushing a panic bar, and counter balance weights will assist in the opening of the door.
- NYC CERT members should identify emergency exits in their community.
- Emergency exits may be used as possible points of egress during a subway emergency.
- NYC CERT members should consider positioning team members at emergency exits during an incident.

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Evacuations in the Subway

- This section will cover MTA protocols for evacuations.
- We will discuss various types of evacuations used at different locations throughout the NYC subway system.
- At the end of this section, the NYC CERT members will have a level of awareness that will enable them to assist other passengers in an emergency evacuation.

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MTA Protocol

Do not evacuate unless instructed to do so by MTA personnel or emergency responders.

A majority of emergencies do not require evacuation of train.

Remember to: Stop, look, and listen.

- NYC CERT members should instruct passengers to remain within the subway car unless instructed otherwise by emergency personnel.
- Before evacuating a subway car, you must:
 - Stop and gather information;
 - Assess the type of incident;
 - Listen for emergency instructions.

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FOR VISUALLY IMPAIRED USERS

Types of Evacuation

- Depending on the location of the incident, passengers may be evacuated using various methods.
- Passengers may be asked to travel from car to car until they reach a car that is in the station.
- The EED can be used to evacuate passengers from:
 - Train to train;
 - Train to track bed;
 - Track bed to platform.
- Passengers may be instructed to exit via the bench wall to maintain distance from the third rail.

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Emergency Evacuation

Walking the track bed.

Limited lighting and smoke in the tunnel.

- During an emergency, passengers may begin to self-evacuate prior to power removal.
- During a derailment or explosion, the outside of the car may become energized if it comes in contact with the third rail.
- The first choice is to exit the car directly into another car at the front or the rear of the subway car.
- If you must exit the car, passengers should use the front and rear exits.
- During an emergency evacuation, there will be limited lighting and uneven terrain.
- Passengers should be instructed to exit single-file using flashlights or lights from cell phones from every fifth passengers to provide illumination. This will also help in reserving battery power on flashlights and cell phones.

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FOR VISUALLY IMPAIRED USERS

Evacuations

Do not exit train unless directed to do so by train personnel or emergency workers.

Follow the path to station or emergency exit as directed.

- Exit the train orderly upon orders of emergency personnel.
- Passengers will be instructed to exit via the emergency exit or the next station.
- Due to the limited number of emergency exits and the space between stations, passengers may be expected to walk long distances to evacuate.
- Evacuation via the track bed or bench wall should always be considered the last resort.

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FOR VISUALLY IMPAIRED USERS

BRIDGES & TUNNELS

- This section will discuss the specific characteristics of the bridges and tunnels.
- We will discuss possible NYC CERT roles during an emergency at a bridge or tunnel.

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FOR VISUALLY IMPAIRED USERS

Bridges

Most bridges have pedestrian walkways.

Swaying is normal.

All bridges have emergency phones in boxes.

- New York City is served by 16 major bridges and more than 2,000 smaller bridges.
- Pedestrian walkways may be found in the center or sides of the bridges and may not provide access to the roadway.
- Bridges are designed to sway to allow them to sustain the stress of wind and the fluctuating weight of vehicular traffic.
- Emergency phones can be found along side roadways.
- NYC CERTs should be familiar with emergency phones as well as pedestrian access and egress points of all bridges within their community.

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Picture of:

Brooklyn Bridge from the New York Daily News, Sunday August 12, 2007

- The age of the bridges found in New York City vary greatly.
 - The oldest bridge in New York City used for vehicular traffic is the Brooklyn Bridge which was completed in 1883.
 - The most recently built bridge in New York City is the Verrazano-Narrows Bridge which was completed in 1964.
- Age, exposure to weather and the deterioration of the structural elements due to the corrosiveness of salt water has greatly weakened the strength of these bridges.
- As a result of the 2007 Minneapolis bridge collapse, New York City has implemented an inspection and repair schedule for all bridges.

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FOR VISUALLY IMPAIRED USERS

Picture of: Missouri Bridge Collapse

Scott City, Missouri – May 25, 2013 morning:

Two Freight trains collided and derailed.

Train cars struck bridge support pillar, causing bridge to collapse.
7 people injured.

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FOR VISUALLY IMPAIRED USERS

Tunnels

Entrances located above sea level.

Cross-over passages found in each tube.

Ventilation tower contains emergency stairs.

Expect a long, difficult climb out.

- Tunnel entrances are located above sea level to prevent flooding of surrounding neighborhoods in the event of a tube failure.
- Tunnel roadways travel beneath the sea bed to limit the potential for flooding.
- Emergency numbers for specific tunnels and bridges can usually be found on signs located along the structure or roadway.
- Due to the required elevation of the entrance and exit, evacuating by foot will be a long uphill climb in either direction.
- Ventilation towers may contain emergency stairwells.
- Tunnels contain mile markers which will indicate your location.

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FOR VISUALLY IMPAIRED USERS

Potential Emergencies

Major accidents

Fires

Explosions

Be aware of exit locations, rapidly changing conditions and poor visibility.

- All tunnels are staffed with emergency personnel and response vehicles.
- Larger tunnels may be staffed with personnel in station booths within the tunnels.
- Due to limited lighting and poor ventilation, passengers should be aware of rapidly changing conditions and poor visibility.
- While traveling in the New York City tunnel system, NYC CERT members should take note of the location of the emergency phones and exits.

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FOR VISUALLY IMPAIRED USERS

Personal Safety

Stay in your vehicle.

Pull into a safe area.

Call for help (911).

If you have to get out:

Move quickly to a safe area and evacuate in the opposite direction of the incident.

- For most emergencies, it is safest to remain in your vehicle.
- If your vehicle is not impacted by the incident, you should position it in a way that does not impede access for emergency vehicles.
- Contact 911 and inform them:
 - Type of incident;
 - Exact location (mile marker);
 - Number of injured; and
 - Current status of the situation.
- If you must evacuate on foot, the safest direction to travel is the opposite direction of the incident.

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FOR VISUALLY IMPAIRED USERS

Assisting Others

Ensure your own safety first.

Position someone to direct emergency personnel.

Do not enter or allow anyone else to enter the affected area.

Direct people to evacuate in the opposite direction of the incident.

- All NYC CERT members are trained to ensure their personal and team safety at any incident.
- NYC CERT members can support the role of first responders by:
 - Positioning teams of two to direct emergency personnel to the incident.
 - Cordoning off the area to restrict non-emergency personnel from entering the scene.
 - Directing all ambulatory passengers to evacuate in the opposite direction of the incident.
 - Notify incoming responders of actions taken prior to their arrival.

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FOR VISUALLY IMPAIRED USERS

NYC Waterways

- This section will discuss the specific characteristics of the NYC waterways.
- We will also discuss possible NYC CERT roles during a NYC waterway emergency.

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Picture of: US Airways Flight #1549

Landed in Hudson River January 15, 2009

Water ferries were first to respond

All 115 crew and passengers survived

- On January, 15, 2009, minutes after US Airway Flight #1549 take-off at 3:26 PM, it crash landed into the Hudson River after a flock of geese over LaGuardia Airport hit the engines.
- Pilot Captain Sullenberger chose to land the aircraft in the Hudson River, as the waterway gave him the only option after realizing Teteboro Airport was too far for the plane to travel.
- All 115 crew and passengers were rescued by nearby water ferries and other emergency services personnel.
- CERT teams in Queens were put on stand-by to assist at the Family Assistance Center (FAC) at a nearby hotel, in coordination with US Airways.
- As there were no fatalities, most family members were able to receive information and reunite with the survivors and the FAC was closed down before CERT was deployed.

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FOR VISUALLY IMPAIRED USERS

Potential Ferry Emergencies

Collision
Boiler explosion
Loss of power
Fire
Weather
Person overboard

- Approximately 1,000 registered commercial ships cross New York Harbor each day.
- Incidents that occur on the water can be more dangerous due to the limited means of egress and resources available for assistance.
- Passengers should always follow the instructions of the captain and crew since routine emergencies found on land are handled differently than on a traveling vessel.
- Fires can originate in trashcans, galleys, engine rooms and in vehicles that are being transported.
- If a passenger falls overboard, hypothermia is a year-round concern.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Picture of: South Street Seaport Ferry Crash

January 9, 2013

8:45 am

363 passengers

86 injured

Injury from being thrown into the air and down the stairs.

Flotation and Evacuation Devices

- Various types of safety equipment, such as life preservers, fire extinguishers and emergency telephones may be found throughout the vessel.
- Life preservers can be found in storage compartments in the seats or in overhead racks.
- As a NYC CERT member, you should:
 - Know the location of safety features and equipment.
 - Always listen for directions from the crew.
 - Alert the crew immediately if you notice a dangerous situation
- When throwing a line to a victim in the water, throw it beyond and to the side of him/her.
- Prior to assisting passengers, NYC CERT members should:
 - Call 911 and ensure that the crew is notified.
 - Obtain his or her personal safety equipment.
 - Listen to and follow emergency instructions.

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Victim Locating and Spotting Landmarks

- Triangulation is a technique used to track the exact location where a person has fallen into the water until a rescue can be performed.
- If a person goes underwater, NYC CERT members should:
 - Line up the exact spot where the person went under with a landmark.
 - Stay in the same spot where step one is performed.
 - Request someone else to mark the spot from a different location.

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Removal Priorities

Reach, Throw, Row, Go?

- If the water emergency occurs within reach of a NYC CERT member on land or a dock, they should consider the following rescue techniques in priority order:
 - Reach: be sure your footing is stable. Consider using a board, branch, ladder, etc., to extend your reach out to the victim.
 - Throw: throw the victim a “line” or utility rope. The line should be thrown past and to the side of the victim.
 - Row: Consider using a small boat to rescue the victim.
 - Go: Go is a **last resort** and should only be considered by trained water rescue experts.
- If the victim goes under prior to the rescue, mark the spot by lining it up with a landmark and having someone else follow the same procedure from a different location.

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Transfer of Command for All Incidents

When emergency personnel arrive on scene, notify them of:

Your identity.
Observations made.
Actions taken, if any.
Offer assistance.

- NYC CERT transfer of command should be as follows:
 - Given by the NYC CERT lead to the NYC OEM CIC or first responder.
 - The report should be succinct and include:
 - Your identity;
 - Type of incident;
 - Number of victims;
 - Any actions taken; and
 - Number of operating personnel and their location.
 - The NYC CERT lead should be prepared to transition command at all times throughout the incident and should use the CERT recorder to maintain written documentation of all activities.

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Questions?

LESSONS LEARNED

- Understanding of the NYC transportation system.
- Understand personal and team safety at a transportation emergency.
- Know CERT roles for a transportation emergency and what actions might take place.

NYC CERT IN ACTION

- Bronx CD #8 CERT Team Chief helped FDNY and NYPD direct passengers from one train car to the next when the 1 Train derailed on May 29, 2013 coming from the Bronx to Manhattan.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?

- What is a message learned this week that you might stress during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

Review and understand the NYC CERT Deployment Protocol and how it may relate to a transportation emergency.

UNIT RESOURCES

NYC OEM website (www.nyc.gov/oem)

MTA website (www.mta.info)

DOT website (www.nyc.gov/dot)

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UNIT 4: URBAN 3

UNIT INTRODUCTION

This unit will focus on the human services element in disaster response and how NYC CERT will most likely be deployed in an emergency. Many CERT deployments will also be in coordination with other human services providers, such as the American Red Cross and Salvation Army, and/or City agencies such as the Human Resources Administration or the Department for the Aging. The basics of psychological first aid will raise your awareness to the effects of working in a disaster and with survivors. New York City's culturally diverse population requires NYC CERT members to be aware of the differences in working with people from various cultures, some requiring access needs.

UNIT OBJECTIVES

- Understand your community's needs.
- Recognize and work with your community's vulnerability.
- Understand human services roles in a disaster.
- Recognize the psychological effects of a disaster.
- Learn about self care.
- Discuss CERT roles and responsibilities.

UNIT REVIEW

The last two weeks have exposed you to the risks and hazards of living and working in the urban environment. The preparedness aspect for fires, utility emergencies, and transportation emergencies are the same for natural disasters (hurricanes, coastal flooding, and tornados). New Yorkers need to make plans and put together their Go Bags and stay-at-home kits.

LOOKING FORWARD

Next week we will start to learn the hands-on medical operations that you and your fellow team members may be deployed to use in the event of an emergency or disaster. The information you learn this week about community vulnerabilities, cultural considerations, and the psychological effects of trauma are directly related to the care you may provide to survivors in your community.

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**Community Disaster Network & Human Services:
Urban Environment 3**

- The vital role CERTs play in preparing their communities for disasters starts with CDNING.
- Linking community groups and organizations through your CERT will allow for more efficient communication in the event of an emergency or disaster.
- As stated earlier while discussing preparedness in ICS, there is a direct correlation between a community's preparedness and how quickly it recovers.

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Picture of: NYC CERT Identification

One permanent
One probationary

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FOR VISUALLY IMPAIRED USERS

Official CERT ID Policy

The credential is the only official identification issued by OEM to NYC CERT members.

The ID must be carried with you to any CERT event or deployment.

The credential allows you to perform only those roles identified in the NYC CERT Standard Operating Procedures (Appendix F).

You will initially be issued a temporary ID. The permanent credential card will be issued when the team chief reports satisfactory performance during the 6-month probationary period.

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Official CERT ID Policy: Continued

The permanent credential is valid for two years.

After two years, the credential is renewed if fully compliant with re-credentialing obligations. The credential does not allow you to break City, State or Federal laws. Deliberate misuse of a NYC CERT credential may result in disciplinary action up to and including dismissal from the CERT program, as well as legal proceedings against the member.

- Renewal of the NYC CERT ID, and thus active membership in the NYC CERT program, is contingent upon satisfactory activity in the form of team participation and completion of post-training and continuing-education classes.
- NYC CERT members can perform only those specific roles assigned to CERT while deployed.

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Unit Objectives

Learn how to build and strengthen your Community Disaster Network (CDN)

Understand human services roles in a disaster.

Recognize and work with your community's vulnerabilities.

Recognize the psychological effects of a disaster.

Learn the importance of self-care.

Discuss what you and your team will do.

Role-play in human service scenarios.

- By the end of this unit you should be able to:
 - Begin your work in building your Community Disaster Network (CDN);
 - Understand what roles CERT may play as part of the human services response;
 - Begin to recognize the unique vulnerabilities of your community with respect to disasters;
 - Understand the basic psychology of disasters and trauma; and
 - Raise your awareness on how to take care of yourself as a CERT.

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The C n CERT stands for Community

Who knows your community better than you?

You are the expert about the neighborhood in which you live. You know the people, the businesses, the best places to park, where to get a good bit to eat, and the quickest way to get through traffic.

How is this information useful?

- Let's start with you.
- Who do you know? What community groups do you belong to? What house of worship do you attend? What schools do your children attend? Where do you buy your groceries?

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What is a Community Disaster Network or CDN?

A Community Disaster Network builds relationships between organizations and people in your neighborhood.

These relationships are built on educating about emergency preparedness, response and recovery.

- Start keeping a record of contacts for each of the places you know in your community. Make sure they know you are a member of CERT, what you can do, and what knowledge you possess about emergency preparedness.
- Your CDN will be the framework for all preparedness, response, and recovery activities.

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Why is it important to build a CDN

In the event of an emergency or disaster, you need to understand the vulnerabilities and resources in your community.

This network can help you communicate important emergency information widely and to people who need it most.

“You shouldn’t be exchanging business cards at the site of an emergency or disaster.”

- The time to build these important relationships is before something happens in your community.
- Use the time wisely to discover the unique and vulnerable aspects of your neighborhood and community. Relationships and building trust take time to grow.

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How to build your CDN

Go out – knock on doors and introduce CERT. Talk about what CERT is and how you are a resource in your community.

Examples of potential Community Connections:

NYPD Precincts – Community Affairs Unit

FDNY Engine Companies and Firehouses

Senior Centers

After-School Programs

Faith-Based Contacts (Houses of Worship and Community Centers)

Block and Tenant Associations

Business Improvement Districts

Civic Associations and Clubs

- Building your CDN is a grassroots operation.
- In order to build these relationships, you need to have face-to-face contact with each and every group in your CDN.
- The green CERT shirts and vests need to be visible in your community as often as possible, so fellow residents know who you are and that you are an asset to their neighborhood.
- This is a good time to talk about Ready New York as well.

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Resources to Help Build Your CDN

City Map

OEM's Letter of Introduction

Team's Letter of Introduction

CDN Outreach Team – members from your team who will go door-to-door and build your network.

- There are materials to help systemize outreach and community information.
- City Map is available to all NYC residents on the City's web page (www.nyc.gov/citymap).
- Each team has a letter of introduction and support from the Commissioner of NYC OEM.
- Your CERT may choose to form an outreach team to begin building your CDN.

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Picture of: New York City Map

- City Map is a tool that can provide specific information about your block, neighborhood, and community.
- Maps have two purposes: 1) Team use – map outreach location, RNY.
2) Help OEM update and maintain its information.
- By entering a specific address, you can find out building and property information, nearby schools, the closest subway entrances, and more.
- Log onto nyc.gov/citymap to try it out!

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FOR VISUALLY IMPAIRED USERS

Human Services Roles in a Disaster

- Providing human services is one aspect of any response to an emergency or disaster.
- Many of the identified roles CERT may play are in the field of human services.
- The Human Services Unit at OEM is active in preparedness, response, and recovery roles.
- There are three main operations in disaster human services:
 - Assistance centers;
 - Sheltering, food, and supplies distribution; and
 - Assisting with special needs populations.

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FOR VISUALLY IMPAIRED USERS

What is Human Services?

Human Services Mission:

To address the human element in response and recovery operations

And

Focus on the individuals and families who are impacted by disasters

- Human services address the personal side of a disaster, including individuals' loss of loved ones, crisis counseling, recovery loans, food stamps, disaster unemployment, legal services, and support to populations with special needs.

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Some Human Services Partners in NYC

American Red Cross
The Salvation Army
New York Cares
CERT
New York Citizen Corps
Medical Reserve Corps
FEMA
NYC Mayor's Office of Community Affairs
NYC Department for the Aging

- Human services partners in NYC include:
 - American Red Cross (www.nyredcross.org)
 - Citizen Corps Council (www.NYC.gov/citizencorps)
 - The Mayor's Community Affairs Unit (www.NYC.gov/cau)
 - City Department for the Aging (www.NYC.gov/aging)
 - FEMA (www.FEMA.gov)
 - Medical Reserve Corps (www.medicalreserve.org)
 - New York Cares (www.NYCares.org)
 - The Salvation Army (www.salvationarmy-newyork.org)
 - NYC Service (www.nyservice.org)
 - There are other partners, depending on the disaster. Many of these partners meet regularly as part of the NYC Citizen Corps Council.

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FOR VISUALLY IMPAIRED USERS

Assistance Centers

Cooling Centers

Resident Service Centers (RSC)

Disaster Assistance Service Centers (DASC)

Family Assistance Centers (FAC)

- Cooling Centers:
 - Community centers (NYCHA, senior centers, libraries, etc.) that extend their hours during extreme heat.
- Resident Service Centers:
 - Are opened to offer services when a building is evacuated or a vacate order is issued.
 - Are centralized locations for affected residents to receive information or assistance.
- Disaster Assistance Service Centers (DASC):
 - Are temporary operations where people who have been economically impacted by a disaster may go to a centralized location and receive information and assistance from the government, private, and non-profit partners.
- Family Assistance Center (FAC):
 - Are opened following an incident with 10 or more fatalities. The primary objective of a FAC is to manage casualty and mortuary information, provide mental health support, and address the basic needs of victims' family and friends.

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Sheltering

Reception Centers

Coastal Storm Evacuation Centers

Shelters provide a safe place to stay:

Cots

Blankets

Food and Water

- Different types of shelters are opened for different types of emergencies.
- There are no permanent shelter locations; they are opened as needed.
- The City of New York has specific evacuation centers that are predetermined for coastal storm emergencies and can be found on OEM's website (www.NYC.gov/oem) or by calling 311.
- At the time of an emergency, officials carefully decide where shelters should be opened.
- Shelters provide a safe place for individuals and families in the event of an emergency.

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Pets in Shelters

Attachment to one's pets
Reliance on service animals

Shelters:

Allows service animal to stay by owner's side.
Designates separate space for all pets.

- Pets are like family to many people. Many pet owners will remain with their pets or take their pets with them during an emergency. Be aware of this fact when helping people evacuate from a dangerous situation.
- NYC coastal storm shelters allow service animals to stay by the owners' side and provides a designated space for all pets.

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Food Distribution

CERT can assist in mass feeding during disasters or emergencies.

Three ways of providing mass feeding:

Mobile feeding – distribute packaged food

Fixed feeding on-site – requires additional training, if serving.

Commodity Distribution Point (CDP)

Mass Feeding plan accounts for individual cultural and / or religious needs.

- Mass Feeding:
 - Small disasters: food will be provided by fast food or local restaurants.
 - Medium disasters: food will be provided by small kitchens as well as fast food or local restaurants.
 - Large disasters: Food will be provided using the same as above, as well as large institutional kitchens.
- A Commodity Distribution Point (CDP) is a temporary site that has been established by the City to provide life-sustaining commodities to the public. CERT members may be deployed to work at CDPs.
- Individual cultural and religious needs will be taken into account.

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Distribution of Relief Supplies

Comfort kits

Soap, shampoo, deodorant, toothpaste and toothbrush

Clean-up kits

Mop, broom, bucket and bleach

Bottled water and snacks

- These are examples of supplies that may be available in shelters or distributed by human services partners after an emergency.
- Many of these are also items that are commonly found in Go Bags.
- Please Note: These items may or may not fit your specific needs due to cultural, religious or medical reasons.
- Take time to prepare yourself now so you will not have to rely on others.

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Human Services Deployments

Hurricane Sandy:

Operated or managed the operations of coastal storm evacuation centers.

Manhattan CERTs assisted with downtown hospital evacuations.

Conducted building checks to provide food and water to homebound and those without power.

Reported to DOHMH & Home-based Healthcare Alliance on condition of patients whom nurses could not reach.

Provided interpretation and information dissemination services.

- CERT was crucial in human services roles during Hurricane Sandy when thousands of New Yorkers were impacted.

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Human Services Deployments: Continued

Picture of: Sandy door-to-door canvassing

- Photo is of CERTs in the Rockaways assisting in post-Sandy food distribution.

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Human Services Deployments: Continued

Haiti Earthquake Family Resources Center

Staffed FAC for 3 weeks.

Provided psychological first-aid.

Performed non-medical tasks.

Crown heights, Brooklyn 7-alarm fire

Assisted in shelter setup.

Assisted in client intake.

- Possible CERT roles are being written into most plans by NYC OEM.
- When a specific plan is activated, OEM will canvas CERT teams to assess their availability and deploy them based on need.

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Human Services Deployments: Continued

Chinatown Bus Crash:

Staffed FAC

Chinatown 5-alarm Fire:

Language interpretation

Evacuation of residents

Edenwald Houses, BX Power Disruption:

Distributed water

Performed door knocks

Assisted FDNY in confined space rescue in elevator

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Vulnerability

When you think about people who are vulnerable in your community, who or what comes to mind?

- What aspects of your everyday life make you more vulnerable to the effects of an emergency?
- Think of your community. Are there hazards that make it more vulnerable to the effects of a disaster than other parts of the city?
- What people or things in your community are more vulnerable to a disaster?

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Vulnerabilities in your Community

Access Needs
Immigration Status
Senior & Homebound
Low Income
Population Density
Natural Hazards
Language Access

- Factors that increase New York City's vulnerability include:
 - Natural and/or geographic factors (coastline, flood zones);
 - Infrastructure (subway, bridges, tunnels, electricity, steam, housing, etc.); and
 - Social (age, income, language, special needs, population density).
- Vulnerabilities can compound if they overlap; if communities or people have more than one.
- What are some vulnerabilities that members of your community might have that are missing from this list?

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Neighborhood Demographic Maps

- Census data can help you better understand your community.
- Census data is put into maps of:
 - People with a mobility disability
 - People living alone who are 65 years and older
 - Major languages spoken other than English
 - People living below the poverty level
 - Linguistically isolated households
 - Hurricane evacuation zones
 - Foreign-born persons
 - Population density
- Go to www.nyc.gov/planning to access more demographic information.

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Cultural Awareness

NYC is one of the most culturally diverse large cities in the U.S. There are over 170 languages spoken throughout the five boroughs. Almost 40% of the population is foreign-born.

Queens is the most diverse country in the United States.

CERT members must work with peoples' cultural differences.

- The human services role puts you face-to-face with the survivors you are helping.
- As a CERT member, you will come into contact with different people, each needing different things.
- Do you have language and/or cultural knowledge that you can offer?
- For more information about cultural diversity and emergencies, visit www.diversitypreparedness.org.

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Cultural Considerations: Continued

Some people you come in contact with may view aid as negative or as a violation of their personal beliefs.

Keeping a level head and a non-confrontational attitude is key.

One of our goals is to do the greatest good for the greatest number of people. If someone refuses your help, inform your section leader, and move on to another person who may need assistance.

Understand norms of other cultures.

- Remember that each person will react to an emergency or disaster in a different way.
- Each person's individual reaction, compounded by personal beliefs and values may make your role in CERT easier or more challenging.
- Your job is to help. If someone does not want your help, move to another individual who does.
- The first responders will be able to serve those CERT does not.

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Helping those with Access Needs

People may have different types (or a combination) of disabilities and access needs, including:

Hearing loss

Vision loss

Physical or developmental disability

Use a wheelchair, cane other aid device

“Invisible” disabilities

- The National Response Framework has identified special needs as:
 - Individuals who before, during, and after an incident may have additional needs in one or more of the following functional areas: maintaining independence, communication, transportation, supervision, and medical care.
- Think about what it means to someone with a special need when it comes to preparing for, responding to, and recovering from a disaster.

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General Tips for Communicating with Individuals with Disabilities

If you offer assistance, wait until the offer is accepted. Then listen to or ask for instructions. Don't be embarrassed if you happen to use common expressions such as "See you later," or "Walk over here," that seem relate to a person's disability.

Don't be afraid to ask questions when you're unsure of what to do. "What can I do to help you?"

- Be aware that not all disabilities are visible!
- For more information, please see resources at the end of this unit. A list of helpful phrases is provided that will help guide you when working with special needs survivors.

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Things to Remember

Always treat each individual with dignity, respect, and courtesy.

Understand each person's individual needs. Disaster situations may be more difficult for a person with a disability.

Offer assistance but do not insist or be offended if your offer is not accepted.

Everyone reacts to stress in a different way.

Relax.

- As a member of NYC CERT you are an ambassador of the City of New York.
- Whether you are assisting survivors at a resident assistance center, attending a post-training class in your borough with other members, or participating in a citywide exercise, your CERT ID and gear identifies you as a resource and asset of NYC.
- Be helpful and proud!

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Psychological Effects of a Disaster:

How people respond to traumatic events.

- Almost all people exposed to a traumatic event will show stress reactions or symptoms of stress in the immediate and/or short-term aftermath of a disaster.
- You may be affected as a member of CERT as you respond to assist your neighbors and friends.
- You may be affected as a resident of the community or of New York City.

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Trauma

A serious injury or shock to the body, as from violence or an accident, OR
An emotional wound or shock that creates substantial, lasting damage to the psychological development
of a person, OR
An event or situation that causes great distress and disruption.

- What different types of loss might happen in the event of an emergency or disaster?
- How may that affect you? Your family? Your community?
- How might your sense of safety and security be threatened?
- It is important to remember that everyone responds to stress in a different way.

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Traumatic Stress

Traumatic stress may affect:

How your mind normally processes things.

How your body normally works.

How you would normally respond or do things.

How you rely on other beliefs and values to get through tough times.

- Stress may cause someone to change how they react to things. Stress can affect how you and your body normally functions:
 - Cognitively (how your mind thinks and processes things);
 - Physically (how your body normally works);
 - Behaviorally (how you may respond to things);
 - Emotionally (how you may feel about things); and/or
 - Spiritually (what beliefs and values you may hold).
- When something traumatic happens, a person may react in a certain way without even knowing it.
- An emergency or disaster may trigger someone's memory of a past traumatic event, therefore compounding his or her reaction.

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What are some Common Reactions to Traumatic Stress?

Questioning one's beliefs, loss of faith
Can't remember things, hard to concentrate
Irritable, sadness, anger
Stomach pains, tiredness, headaches
Sleeping too much or not enough, not wanting to do anything

- Some individuals may have persistent stress reactions, or they may have symptoms which may worsen over time.
- Reactions will differ based on the individual's perception of the event. Someone who is living in a house destroyed by a tornado may have very different reactions or symptoms than the first responders who assist them.
- If someone continues to have strong reactions or symptoms six months or more following an event, professional mental health services may be needed.
- For mental health referrals at any time, call LIFENET (a Mental Health Association of NYC program), seven days a week, 24 hours a day, 1-800-LIFENET (543-3638); 1-877-AYUDESE (1-877-298-3373) in Spanish; 1-877-990-8585 for Korean and Chinese callers. People who speak other languages may call 311.
- What other reactions can you think of?

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What Those Affected Need

What can CERT provide when you encounter someone who has been affected by a disaster?

Listen and show empathy.

Ask “What do you need?”

Help those affected to connect with their natural support systems (family, friends, faith institutions).

- Once your team is deployed in a human services role, you will meet and help survivors directly affected by an emergency or disaster.
- Listen to their needs, offer them assistance within the scope of your training, and assist them on their way to recovery.
- Your role is to provide general, immediate, concrete, and emotional support. You do NOT provide formal mental health intervention: that will be provided by professionals.
- Non-mental health professionals may provide psychological first aid, a tool that may stabilize a survivor.
- The goal of on-scene psychological intervention on the part of CERT members should be to stabilize the incident scene by stabilizing individuals.

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What is Empathy?

Empathy is NOT sympathy.

Empathy is understanding what the person has been through and what he or she is feeling.

Sympathy is sharing those feelings with someone.

In the event of a tragedy, sympathy will wear you down. Empathy allows you to work with those affected in a healthy way.

- Not everyone has empathy or is capable of providing empathy to others.
- If you are feeling frustrated in your CERT role and need to change to another role, let your supervisor and team chief know.

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What can you say...

“Can I get you something warm / cold to eat / drink?”

“Do you want to tell me what happened?”

“Is there anything I can do for you or anyone I can call to help you out?”

“I am so sorry for your loss.”

- By saying the right things, you can promote:
 - Safety
 - A sense of calm
 - Connectedness
 - A sense of hope
 - Self-efficacy (how someone’s beliefs about their own capabilities produce positive effects/outcomes)
- When in doubt of what to say just ask what you can do.

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What NOT to say...

I understand.
Don't feel bad.
You're strong.
You'll get through this.
Don't cry.
It's God's will.
It could be worse.
At least you still have...

- Your role is to provide empathy and show understanding of the other person's feelings, not to judge.
- By being careful what you say, you can avoid making someone feel worse.

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How will I learn how to do this?

Education: Advanced training opportunities are offered by NYC CERT.

Talk to other CERT members and ask questions during team meetings.

Self-learning through books, websites, and classes.

- NYC CERT offers post-training to active, credentialed members throughout the year. While these courses are designed to enhance your role as a CERT member, they will also count for credits towards re-credentialing (refer to your SOPs).
- Always be open-minded and willing to learn new things.
- Check out resources on-line or in your local NYC public library.

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Advanced Training Opportunities

Citizen Corps Council trainings and conferences
Cultural Awareness
Community Outreach
Communicating with the Disabled
Coastal Storm Shelter Training

- Through the NYC CERT program you can continue your training.
- Every year the NYC Citizen Corps Council hosts a disaster volunteer conference. Past themes have included: Enhancing Cross-Cultural Communication, Preparing to Respond, and Leadership and Cross-agency Collaboration.
- NYC CERT partners with other agencies and organizations to offer courses in psychological first aid, utility awareness, communication with the disabled, and more.

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Self-Care

- Taking care of yourself as a CERT member will allow you to do your job in an effective and healthy way.
- As you help survivors of an emergency or disaster, do not forget to look after your own team members to make sure everyone is looking after themselves in a positive way. This can be before, during, and after a response.

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Why is self-care important for you?

Being a CERT volunteer can be stressful, therefore

To do the best job you can you must monitor and care for your own physical and mental well-being.

Team members must also look out for one another.

- Being a volunteer in a response and recovery role may be stressful.
- You must perform your responsibilities safely and effectively so you can monitor and care for your own physical and mental well-being.

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Self-Care Tips:

Know what your tasks are and what is expected of you.

Work with your supervisor to prioritize tasks.

Plan for regular breaks to eat and rest.

If you need additional breaks, let your supervisor know.

Don't overdo it. You can't help others if you are unable to help at all.

- Open communication with your team chief and fellow team members will help with self care.
- Eight hours during an emergency is very different from that of a normal eight hour day. Everybody needs a break; emergencies are exhausting.
- You can't help others if you are exhausted or distracted.

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Stress Busters

Get enough sleep.

Exercise

Eat a balanced diet.

Balance work, play and rest.

Connect with others.

Use spiritual resources.

Laugh!

Allow yourself to receive as well as give: remember that your identity is broader than that of a helper.

- Take time to take care of yourself.
- Know what stress relief techniques work for you and try to incorporate them into your daily routines.
- By preparing yourself now, your ability to cope will be much higher during an emergency.

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CERT ROLES and RESPONSIBILITIES

What Will You Do?

- What human services roles might CERT be asked to provide in the event of an emergency or disaster?
- How can you plan for these roles with your team?
- How will your CDN make these roles easier?

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NYC CERT Roles

Before a disaster CERT members can:

- Play an invaluable role in preparing themselves, their families, neighbors, co-workers, and communities for emergencies.
- Organize neighborhood preparedness activities, including Ready NY presentations.
- Build a network which can help prepare and educate their community on disasters.
- Disseminate information and provide education on building disaster plans.

During a disaster CERT can:

- Help address mass care needs in their community.
- Help identify and reduce the psychological affects of emergencies for themselves, their teams and those they help.
- Assist with mass care (sheltering, food, clothing, etc.)
- Assist with psychological and physical care.

After a disaster CERT can:

- Provide vital recovery information to and from their community.
- Help identify their community's needs and relay this information to OEM.
- Assist with recovery services.

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CERT Role as Community Liaison

Assist in relaying information to the community.
Assist NYPD, Mayor's Office of Community Affairs Unit, or other City agency staff.
Assist OEM in assessing community needs.
Assist with community outreach around preparedness and readiness.

CERT Role in Missing Person Case

Assist in combing area / performing outreach.
Assist in distribution of flyers.

CERT Role in Assistance Centers

Assist OEM / FEMA in disseminating info to communities.
Provide translation / interpretation support within DASC.
Provide hospitality support with DASC.
Escort humanitarian teams through communities (i.e. accompany Mennonites on debris clean-up, muck outs.)

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LESSONS LEARNED

- How to start and build your CDN
- Understand the Human services role in preparedness, response, and recovery
- Recognize and understand your community's vulnerabilities
- Recognize the psychological effects of a disaster
- Learn about self-care

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message learned this week that you might stress during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

It is possible you may encounter some survivors during your disaster simulation. Think about what you may say to help someone you may be asked to help. Prepare yourself. Make a plan.

UNIT RESOURCES

Tips for Communicating with People with Disabilities:

- As a general rule, you will never offend or confuse by using **"person-first" language**. For example:
 - "A man who is blind won the lotto."
 - "Susan, who uses a wheelchair, entered the room."
 - "Mr. Smith has mental retardation and works for the hospital."
- **Do not put the person's disability before their name** (e.g., "a blind woman" rather than "a woman who is blind").
- It is better to say "people with disabilities" than "disabled people" or, worse yet, "the disabled."
- **Speak directly to the individual**, not their interpreter, spouse, assistant, etc.
- **Ask, don't assume.** Ask if you can assist, and if so, how to best assist.

The information above is from the National Organization on Disability's site www.nod.org in its media section. There is some good, basic information on this site as well as links to other information.

Actions: General Tips for Communicating with People with Disabilities

- When introduced to a person with a disability, it is appropriate to offer to shake hands. People with limited hand use or who wear an artificial limb can usually shake hands. (Shaking hands with the left hand is an acceptable greeting.)
- If you offer assistance, wait until the offer is accepted. Then listen to or ask for instructions.
- Treat adults as adults. Address people who have disabilities by their first names only when extending the same familiarity to all others.
- Relax. Don't be embarrassed if you happen to use common expressions such as "See you later," or "Did you hear about that?" that seem to relate to a person's disability.
- Don't be afraid to ask questions when you're unsure of what to do.

Words:

Affirmative Phrases

person with an intellectual, cognitive,
developmental disability

person who is blind, person who is visually impaired the blind

person with a disability

Negative Phrases

retarded; mentally defective

the disabled; handicapped

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person who is deaf	the deaf; deaf and dumb
person who is hard of hearing	suffers a hearing loss
person who has multiple sclerosis	afflicted by MS
person with cerebral palsy	CP victim
person with epilepsy, person with seizure disorder	epileptic
person who uses a wheelchair	confined or restricted to a wheelchair
person who has muscular dystrophy	stricken by MD
person with a physical disability, physically disabled	crippled; lame; deformed
unable to speak, uses synthetic speech	dumb; mute
person with psychiatric disability	crazy; nuts
person who is successful, productive	has overcome his/her disability; is courageous (when it implies the person has courage because of having a disability)

The general tips and affirmative/negative phrases to the left are from the Office of Disability Employment Policy.

<http://www.dol.gov/odep/pubs/fact/comucate.htm>

The site features a good and easy to use guide that provides information on the following specific topics:

- Tips for Communicating with Individuals Who are Blind or Visually Impaired
- Tips for Communicating with Individuals Who are Deaf or Hard of Hearing
- Tips for Communicating with Individuals with Mobility Impairments
- Tips for Communicating with Individuals with Speech Impairments
- Tips for Communicating with Individuals with Cognitive Disabilities

For more information:

[Guidelines for Reporting & Writing About People with Disabilities](http://www.lsi.ku.edu/lsi/internal/guidelines.html)

<http://www.lsi.ku.edu/lsi/internal/guidelines.html> - The Life Span Institute at the University of Kansas:
This guide is more comprehensive and specific, yet still very easy to use; includes an alphabetical listing of appropriate terminology

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UNIT 5: DISASTER MEDICAL OPERATIONS 1

UNIT INTRODUCTION

What comes to mind when you hear disaster medical operations? How big of a disaster would have to have occurred in New York City before your CERT team may be deployed? What will you, as a trained NYC CERT member, be asked to do in regard to disaster medical operations? Are you ready?

The word “disaster” means different things to everyone. What comes to mind may be anything from earthquakes, floods or tornados, to a terrorist event, such as the attacks on the World Trade Center. What caused the event is not as important as the result. The bottom line is that the New York City emergency response system is likely to be strained. With proper training and preparation, NYC CERT may be able to alleviate some of the stress on the system.

There are a number of scenarios that your team may face in relation to disaster medical operations. While the possibility always exists that your team may be forced to work on its own during a disaster, in the City of New York it is much more likely that your CERT team will be tasked to assist FDNY EMS personnel already on the scene. In this scenario, NYC CERT members will work under the direction of an EMT, paramedic, or FDNY officers.

In the field of emergency management, the need for disaster medical operations is based on two assumptions. The first assumption is that the number of victims will exceed the local capacity for treatment and the second is that survivors will assist others. The goal, whether we are speaking about first responders or NYC CERT, is to do the greatest good for the greatest number of victims in the shortest amount of time. While attempting to achieve this goal, NYC CERT members should remember that safety is always the first priority.

In this unit we will discuss how victims die in a disaster and how trained NYC CERT members may intervene in the process and increase a victim’s chance of survival. Experts agree that providing simple medical care may save over 40 percent of disaster victims that are in the second and third phases of dying, which include death within several hours due to excessive bleeding and death in several days or weeks due to infection or multiple system failure. NYC CERT members must understand the importance of maintaining personal hygiene and rescuer safety when dealing with patients. We will discuss and practice treatment for life-threatening conditions including airway obstruction, excessive bleeding, and shock.

When it comes to disaster medical operations, NYC CERT members must be able organize and function efficiently to save lives. The ability to quickly triage and sort patients into treatment areas will be vital during CERT operations. There are several common problems in triage operations that can be avoided through careful planning and preparation. These include inadequate medical size-up, lack of a team plan or goal, indecisive leadership, too much focus on one injury, and engaging in treatment rather than triage. In this unit the NYC CERT member will practice patient assessment and various treatment techniques. At the end of this unit, you will have the opportunity to conduct triage under simulated disaster conditions.

UNIT OBJECTIVES

- Understand how NYC CERT will have the greatest impact in medical operations during an emergency or disaster.

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- Know proper hygiene in a medical response.
- Understand how to organize an initial medical operation.
- Learn basic triage techniques.
- Learn how to control bleeding and care for various wounds.
- Identify and treat for shock.
- Understand NYC CERT's roles.

UNIT REVIEW

The urban environment units have prepared you for the hands-on material that begins this week. Please keep in mind all you have learned up to now: the types of emergencies that might occur in NYC, the roles CERT may be asked to play, how you can prepare your community for these emergencies, and how your knowledge can assist in working directly with the people affected by these emergencies and disasters.

LOOKING FORWARD

Next week you will learn the second part of disaster medical operations. You will build on what you learn in this unit. Hands-on experience continues with light search and rescue and fire safety in the following units.

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Disaster Medical Operations: Part 1

- This unit will focus on basic medical operations for NYC CERT such as triage and first aid.
- You will also learn how to maintain proper hygiene and set-up initial medical operations in accordance with ICS protocol and procedures.

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Disaster Medical Operations

The number of victims exceeds local capacity.
Many survivors will assist others.

- NYC CERT may be deployed when the total number of victims exceeds the capacity of the responding agency/agencies.
- At a large scale incident survivors may be tasked with assisting in treatment.
- Treatment during an incident is only one aspect of medical operations. NYC CERT teams must recognize the need to organize patients according to their injury, assess life threats, and document their actions.

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Objectives

Understand how people die in disasters, and how a CERT will have the greatest impact during disaster medical operations.

Maintain proper personal hygiene during disasters.

Organize initial medical operations during a disaster.

Perform first aid to bleeds and wounds.

Treat shock.

Open an airway.

Manage head and spinal injuries.

- NYC CERT members must be able to recognize threats to a victim's life that must be treated before moving on to the next patient.
- Personal hygiene will limit cross contamination and reduce infection.
- Proper organization during a disaster is the first step in providing assistance.
- Triage will allow the team to assess the victims quickly.
- Performing first aid and treating shock will minimize the risk of further harm.
- Opening the airway must be done when a patient is found not breathing during triage.
- Spinal immobilization should be done by a trained medical professional and can be supported by a NYC CERT member.

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How do people die during a disaster?

- We will now discuss how to recognize the early phases of death.
- We will also review the limitations of NYC CERT training and the need to do the greatest good for the largest number of people.

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Disaster Medical Operations

Understanding How People Die

Phase 1: Death within minutes

Overwhelming vital organ damage.

Phase 2: Death within hours

Excessive bleeding.

Phase 3: Death in days to weeks

Infection

Multi-system failure

- The three phases of death illustrate how people die during and after a disaster.
- Phase one usually occurs prior to the arrival of emergency personnel and would require advanced medical treatment to alter the outcome.
- Phase two will be encountered by emergency personnel and can be mitigated at the scene using proper bandaging techniques;
 - Failure to address excessive bleeding in a timely fashion can result in serious harm or death.
- Phase three can be the result of cross contamination or poor hygiene.
 - Washing hands frequently or changing gloves after each patient will limit infection.

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Personal Hygiene

- Personal hygiene is vital during disaster medical operations.
- Proper personal protection will safeguard the NYC CERT member and the patient.

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Hygiene

Wash hands frequently using soap and water.

Wear latex gloves; change after each patient.

Wear a mask and goggles.

Keep bandages / dressings sterile.

Avoid contact with body fluids.

- Frequent hand washing is one of the easiest ways to limit the spread of infection.
- Changing latex gloves with each patient limits cross contamination even if hand washing facilities are not available.
- N-95 respirators will protect the NYC CERT member from airborne particles and diseases such as tuberculosis.
- Goggles protect the eye area from contagious fluids.
- Use new bandages for each patient.
- Even when protected with proper equipment avoid contact with bodily fluids in case one of the protection systems fails.

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Organizing

- Organizing the structure used at a medical operation will create an efficient area for managing patients.
- We will also discuss the role of the FDNY EMS as the coordinator of pre-hospital care.

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Organizing Initial Medical Operations at a Disaster

FDNY / EMS coordinates pre-hospital medical care at:

Fires

Crimes in progress.

Public health emergencies.

Public safety emergencies.

- Regardless of which agency initiates patient care, FDNY EMS is responsible for coordinating pre-hospital medical care as specifically stated in the City of New York Citywide Incident Management System (CIMS) document released in April 2005.

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Triage

A process for sorting injured people into groups based on their need for medical treatment.

Simple Triage And Rapid Treatment

Based on three criteria:

Ventilation – Breathing rate

Perfusion – Pulse

Mental Status – Answering simple questions

- The three criteria stated above allow a NYC CERT member to quickly assess the status of a patient and issue the appropriate tag.
- Ventilations can be assessed visually with little or no patient contact.
- An individual's pulse can be assessed via the carotid artery found in the neck or the radial pulse found in the wrist.
- Simple questions such as a person's name, where they are, and if they know what happened will enable the NYC CERT member to determine patients' mental status quickly.

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METTAG Triage Tag

Use S.T.A.R.T to categorize patients:

Black – Deceased
Red – Immediate transport
Orange – (Not for CERT use)
Yellow – Delayed transport
Green – Walking wounded

- METTAG triage is a standard used by emergency responders.
- Color coding patients based on injury assessment allows emergency medical personnel to prioritize treatment and transportation.
- NYC CERT members should maintain a list of the total number of tags issued broken down by color.
- If a NYC CERT member is uncertain of which category the patient falls into, he should upgrade the patient to the next color tag. (e.g. green to yellow; yellow to red; or red to black).

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Procedure

Direct all ambulatory patients (walking wounded) to a safe area.

Stay alert to signs of deteriorating medical condition.

These are Green patients who will be assessed at a later time.

- NYC CERT members should use a loud voice and say: “IF YOU CAN HEAR MY VOICE, WALK TO _____ (example: the parking lot by the grocery store)”.
- People who are able to follow these commands are green tags based on their ambulatory status.
- By moving them to one location, you have established your green tag treatment area.
- This initial action will reduce the total number of victims that need to be treated.
- A minimum of two NYC CERT members should be assigned to the green tag group to assess the victims and gather information about the incident.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Assess Respirations

If not breathing, attempt to reposition the airway twice.

If still not breathing, BLACK TAG.

If respirations are present after repositioning the airway, RED TAG.

If respiratory rate is > 30 (one breath every two seconds), RED TAG.

If respiratory rate is <30, assess circulation.

- In an effort to do the greatest good for the largest number of people, NYC CERT cannot dedicate all resources to one patient.
- If a patient does not begin breathing after repositioning the head twice, we must black tag the patient and move on.
- If the patient has a difficult time maintaining his airway in an open position, consider using a family member or a green tag victim to maintain this position.
- Respirations can be assessed counting the rise and fall of the chest for a period of thirty seconds and multiplying by two.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Assess Circulation

Absent radial pulse, RED TAG.

If the radial pulse is present, assess mental status.

- Patients who are breathing may still not have a radial pulse. This is a clear indication of a circulation problem.
- Two methods to assess circulation quickly are to depress the nail bed or ear lobe of the patient and determine if color is regained within two seconds. If color is not restored within two seconds, the patient should be red tagged.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Assess Mental Status

Patients who are unconscious or unable to follow simple commands, RED TAG.

Normal responses, YELLOW TAG.

- A patient without a visible injury who did not move to the green tag area should be evaluated for an altered mental status.
- Patients should be asked three simple questions:
 1. Can you squeeze my hand?
 2. Do you know where you are?
 3. Do you know what happened?

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Rapid Treatment During S.T.A.R.T

Only immediate life threats should be corrected prior to moving on to the next patient, including:

Airway obstructed by the tongue, severe bleeding, and shock.

Use the walking wounded to assist with treatment for themselves or others.

- NYC CERT members must recognize the three life-threatening injuries that require further treatment during triage:
 - Airway obstruction
 - Severe bleeding
 - Shock
- Failure to treat immediate life threatening injuries during triage may result in severe injury or death.
- NYC CERT members should be reminded that any treatment beyond life threatening injuries will limit the total number of people who may be triaged.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Triage Pitfalls

Inadequate medical size-up
No team plan, organization, or goal
Indecisive leadership
Too much focus on one injury
Treatment, rather than triage, performed

- NYC CERT incident commanders should size-up all scenes prior to the deployment of personnel.
- Strategies should be developed based on the following criteria:
 - Type of incident;
 - The number of patients;
 - The extent of injuries; and
 - The number of team members available.
- The scene should be divided geographically to manage a larger number of patients.
- Groups should be assigned within the boundaries of the sectors to limit duplication of resources and maintain span of control.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Triage Quiz

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded greet tag patients have been removed to a safe area.

Breathing: 24/min

Radial pulse: Present

Mental Status: Unconscious

- Red Tag
 - Less than 30 respirations per minute,
 - Radial pulse present, and
 - **Unable to follow simple commands (answer three questions).**
- This patient is a red tag because she is unconscious.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded green tag patients have been removed to a safe area.

Breathing: < 30 / min

Radial pulse: Absent

- Red Tag
 - Less than 30 respirations per minute,
 - **Radial pulse absent**, and
 - Able to follow simple commands (answer three questions).
- This patient is a red tag because the radial pulse is absent.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded green tag patients have been removed to a safe area.

Breathing: 38 / min.

- Red Tag
 - **Greater than 30 respirations per minute,**
 - Radial pulse present, and
 - Able to follow simple commands (answer three questions).
- This patient is a red tag because breathing is greater than 30 respirations per minute.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded green tag patients have been removed to a safe area.

Breathing: No

Airway Repositioned: Twice

- Black Tag
 - No respirations.
 - Attempted to reposition airway twice and victim was unable to maintain an open airway.
- This patient is a black tag because he/she is not breathing after repositioning the head two times.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded green tag patients have been removed to a safe area.

Breathing: < 30 / min.

Radial Pulse: Present

Mental Status: Follows Commands

Broken Leg

- Yellow Tag
 - Less than 30 respirations per minute,
 - Radial pulse present, and
 - Able to follow simple commands (answer three questions);
 - **Immobilized due to injury.**
- This patient is a yellow tag due to the broken leg.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

S.T.A.R.T Quiz

All walking wounded green tag patients have been removed to a safe area.

Breathing: 26 / min

Radial Pulse: Present

Mental Status: Follows Commands

Assisting Red Tag Patient

- Yellow Tag
 - Less than 30 respirations per minute,
 - Radial pulse present, and
 - Able to follow simple commands (answer three questions);
 - **Remained in disaster scene to help a family member.**
- This patient is a yellow tag because she remained within the incident after being instructed to leave the scene.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Establishing Treatment Areas

- Establishing a treatment area is an immediate need when performing disaster medical operations.
- We will also discuss NYC CERT roles in establishing a treatment area.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Picture of: Patient Flowchart

- This flowchart is a visual representation of “START”.
- Rescue the victim, triage, and transport in priority order.
- The system is designed to transport the most seriously injured patients (red tags) first, followed by those less seriously injured.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Treatment Areas

Safe area

Close to (but upwind and uphill from the hazard

Accessible by transport vehicles

Able to grow

Picture of: Treatment site position upwind and uphill from hazard

- The treatment area must provide a sense of safety to the patients. They have already been traumatized and need to feel their situation is improving.
- The location selected as a treatment area must be free of the contaminants associated with the incident (smoke, chemicals, fire, etc.).
- It should be an area where numerous ambulances would have easy access and egress points to facilitate patient transport.
- If possible, select an area that will allow for expansion of the patient care area.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Picture of: Treatment Area Diagram

- Always attempt to set up the treatment areas so ambulances can easily access and transport red tag patients as they need to get to the hospital as soon as possible.
- The treatment area should be set up where red tag patients would be closest to the ambulance transport area and the yellow tag patients and green tag patients would be behind them.
- Black tags patients should be documented but not moved. There are other victims that need assistance at this time. Black tag patients will be taken care of at the appropriate time.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Triage and Documentation

- Practicing the lessons learned in this unit for triaging and documentation is a must for all team members during this course and following graduation. Triage techniques and other disaster medical operations must be reviewed often, so when a team is deployed its members are trained in the task.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Patient Assessment

- Patient assessment and the signs to look for when determining a patient's injuries are important parts to the overall disaster medical operations.
- We will discuss NYC CERT's roles in patient assessment.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Conducting Patient Assessment

Head-to-toe assessment:

Determine extent of injuries and treatment; document injuries.

Wear personal protective gear.

Assess all patients.

Use verbal / hands-on approach.

Pay careful attention.

Look, listen, feel.

- After initial triage and setting up the treatment areas, patient assessment is used to discover the extent of injuries and to monitor a patient's status.
- Speak to the patients and listen to what they are telling you.
- You may discover that a patient's triage status has changed and he or she needs to be changed to yellow tag or red tag.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Indicators of Injury

How were they injured?

Signs of shock

Airway obstructions

Labored or shallow breathing

Excessive bleeding

Cuts and / or bruising

Swelling

Severe pain

Disfigurement

Provide IMMEDIATE treatment for life-threatening injuries!

- The mechanism of injury, e.g. what caused a patient's injuries, is vital in how you treat the patient.
- Not all injuries will be obvious and knowing what caused the injuries will allow you to treat the patient.
- If you assume an injury is present but hidden and you treat the patient for that injury, you have done no harm and have potentially minimized the patient's suffering.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Airway

- The patient's airway is a primary assessment for treatment.
- We will also discuss NYC CERT's roles in establishing and maintaining the patient's airway.

Airway Obstructed by the Tongue

- The tongue has a tendency to block patients' airways when they are unconscious and lying on their back (supine).
- The tongue is a large muscle that can block the oral and nasal airway from allowing oxygen to enter the lungs.
- When a patient loses consciousness, the muscles in the body relax. The tongue will relax and fall to the back of the throat, blocking the airway.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Diagram of: Head-Tilt / Chin-Lift Technique

- A technique to help clear the airway is the head tilt/chin lift which should be used on patients where there is no indication of a spinal injury.
- This technique will lift the tongue away from the back of the airway and allow oxygen to flow to the lungs.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Head-Tilt / Chin-Lift Video

- This video will demonstrate the head tilt /chin lift technique.
- Lay patients on their back, place a hand on their forehead and lift up from the point of their chin.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Managing Head and Spinal Injuries

- Closed head and spinal injuries need specific knowledge of how to manage.
- We will also discuss NYC CERT roles in managing closed head and spinal injuries.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Closed Head & Spinal Injuries

Life-threatening:

Untreatable in field during disaster

Minimize movement

Airway

Vomiting

- If you suspect a closed head injury, you must assume the mechanism of injury was substantial enough to possibly cause a spinal injury.
- A NYC CERT member would triage the patient as a red tag and maintain spinal immobilization and minimize movement until medical attention arrives.
- These types of injuries cannot be resolved on scene but they can be minimized by taking the proper steps to avoid further injury.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Head / Spinal Injury: Signs & Symptoms

Change in level of consciousness
Severe pain / pressure
Inability to move
Difficulty breathing
Visual deficits
Tingling in extremities
Blood / fluid in ears / nose
Bruising behind ears / around eyes
Obvious trauma
Seizures
Nausea / vomiting
Mechanism of injury

- Mechanism of injury is a key element in determining the extent of a patient's injuries.
- When the mechanism of injury is determined, the patient can be treated based on the signs and symptoms of injury and potential unseen injuries.
- Use your learned knowledge of the signs and symptoms of closed head and spinal injuries to assess patients who may need to be triaged.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Questions?

LESSONS LEARNED

- Understanding of how NYC CERT will have the greatest impact in medical operations during an emergency or disaster.
- Knowledge of proper hygiene in a medical response.
- How to organize an initial medical operation.
- Basic triage techniques.

NYC CERT IN ACTION

Teams have provided triage and basic first aid at local bike rides through the city and at the Department of Transportation's Summer Streets Weekends.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message you might stress, learned this week, during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

Practice and know how to triage. Use the examples from this unit and ones from next week. Also take into consideration triaging people from different cultures and how you may need to raise your awareness while working with them. Take turns with members from your class in playing victim and triaging.

EVALUATION

Please fill out the evaluation for Unit 5 in the back of the binder. When completed, please hand in to your OEM liaison.

UNIT RESOURCES

American Red Cross in Greater New York
<http://www.nyredcross.org/>

American Heart Association
www.americanheart.org/

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL FOR VISUALLY IMPAIRED USERS

UNIT 6: DISASTER MEDICAL OPERATIONS 2

UNIT INTRODUCTION

Disaster Medical Operations II will continue with the techniques and procedures in providing care for the greatest number of people in the event of a large scale emergency or disaster. Basic first aid will be reviewed and practiced as it relates to bleeding, fractures, sprains, and strains, and the treatment for shock.

UNIT OBJECTIVES

- Learn how to control bleeding and care for various wounds.
- Understand how to provide initial care for fractures, sprains, and strains.
- Identify and treat for shock.
- Understand a NYC CERT's role and how a team works during an incident.

UNIT REVIEW

Review the rules for triaging regularly. Once you complete your triage, you may be asked to perform some of the techniques you learned tonight.

LOOKING FORWARD

Next week you will learn the basics of fire safety and the next week, light search and rescue. A large fire may need triage of survivors and to have a resident assistance center set up. A terrorist attack may cause a site to need light search and rescue, and there may be fires within and nearby the site. All the different units in this course each fit into one another to form an overall approach to prepare, respond, and recover from emergencies and disasters in your community.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Disaster Medical Operations – Part 2

- This unit will discuss how NYC CERT members can provide basic first aid during a response.
- This unit will also discuss how NYC CERT members can assist emergency medical personnel during an emergency.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Part 1 Review

Proper personal hygiene
Organization of Disaster Medical Operations
Patient assessment

- The most important method of proper personal hygiene is washing hands frequently.
- Use gloves, masks, goggles and avoid contact with bodily fluid.
- Change gloves between patients.
- During assembly, one member should be placed in charge of the triage group.
- The triage group supervisor should not engage in tactical operations but rather he or she should supervise the members of the group and relay information to the operations section or NYC CERT lead.
- Patient assessment is a head-to-toe examination used to find injuries not discovered during triage.
- Determining the cause of injury can assist in determining the location and extent of the injury.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Part 1 Review

Head-tilt / chin-lift

Head and Spinal injuries

S.T.A.R.T

- The head tilt/chin lift is performed to remove the tongue from the back of the throat when a victim is unconscious.
- Head tilt/chin lift should be performed twice – if the victim does not respond he or she should be black tagged.
- Head and spinal injuries require immediate medical attention and advanced medical care.
- Maintain spinal stabilization in patients with suspected head and/or spinal injuries.
- **START** – is the acronym for simple triage and rapid transportation and is recognized nationally by emergency medical personnel.
- The fastest way to reduce the total number of patients who require triage is to have one member make an announcement requesting that anyone that can hear your voice move to a specified location. This will remove all of the green tagged individuals.

Objectives

Control bleeding and care for various wounds.
Provide initial care for fractures, sprains and strains.
Identify and treat for shock.

Key Points

The objectives of this unit are:

- To learn effective methods for controlling bleeding and wound care.
- To learn how to assist an emergency medical professional to immobilize an injury.
- To identify the indicators of shock and the methods for treating shock.

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FOR VISUALLY IMPAIRED USERS

Objectives: Continued

Treat burns

Treat environmental emergencies:

Hypothermia and frostbite

Heat exhaustion and heat stroke

- We will also discuss the proper treatment of burn injuries.
- NYC CERT members will learn how to treat injuries caused by the environment.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Bleeding and Wounds

- This section will discuss methods for controlling bleeding and wound care.
- The objective for first aid treatment for wounds is to control bleeding and prevent secondary infections.

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FOR VISUALLY IMPAIRED USERS

Wound Care

Control bleeding.

Prevent secondary infection.

Clean wound:

Don't scrub.

Irrigate.

Apply dressing and bandage.

Check for circulation and neurological function.

- Wound care is usually performed after the completion of triage.
- Proper pre-hospital care will have a dramatic impact on the extent of the injury.
- Clean the wound by irrigating with water, flushing with a mild concentration of soap and water, and then irrigating with water again.
- Check circulation for color, warmth and sensation before and after applying a dressing to ensure bandaging does not interfere with circulation or neurological function. If capillary refill is slow, loosen dressing.
- Constricting circulation in one region can cause toxins to build up in that area causing multi-system failure.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Types of Bleeding

Arterial
Venous
Capillary

- Arterial bleeds are under high pressure resulting in bright red blood which spurts as the heart pumps and can be difficult to control.
- Venous bleeds are under low pressure with dark red blood. Large veins can be difficult to control.
- Capillary bleeds are under very low pressure oozing dark blood and frequently stop bleeding on their own.

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FOR VISUALLY IMPAIRED USERS

Controlling Bleeding

Direct pressure

Pressure bandage

Tourniquet

- Direct pressure should be applied over a sterile dressing. If bleeding soaks through the dressing, add more without removing the previous dressings.
- Pressure bandages can be applied using rolled gauze wrapped around the wound area.
- Tourniquets are considered a last resort to save a life when all other bleeding control has not worked and professional medical care is seriously delayed. Once applied they should not be released.
- A tourniquet should be wide and placed as close to the injury site as possible, preferably below the joint. Record the time of application on the victim's forehead.

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FOR VISUALLY IMPAIRED USERS

Rules for Checking Dressings

No active bleeding:

No further action required.

Active bleeding:

Redress over existing dressing.

Maintain pressure and elevation.

- In the absence of active bleeding, dressings must be removed and the wound flushed and checked for signs of infection at least every four to six hours. Signs of possible infection include:
 - Swelling around the wound site;
 - Discoloration;
 - Discharge (pus) from the wound; and
 - Red striations from the wound site.
- If bleeding continues to saturate the dressing, apply an additional dressing on to the original dressing and maintain pressure and elevation.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Various Injury Types and Treatments

- This section will discuss the injuries that may be encountered by NYC CERT members during deployment.
- This section will also discuss possible treatments a NYC CERT member may perform during deployment.

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FOR VISUALLY IMPAIRED USERS

Amputations

Control Bleeding.

Treat for shock.

Save tissue parts:

Keep parts cool.

Keep with victim.

- The first step in medical treatment for an amputation is to control the bleeding.
- The volume of blood loss associated with an amputation will vary depending on the location of the injury and the manner in which the loss occurred.
- NYC CERT members should watch for signs of shock and treat as necessary.
- NYC CERT members should keep the extremity cold but not frozen.
- Place the extremity in a clean container with a lid and keep it with the victim so medical staff can attempt to reattach it in the hospital.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Impaled Objects

Stabilize:
DO NOT remove.
Control bleeding.
Clean and dress wound.

- Immobilize the affected body part.
- Do not remove the impaled object unless it is interfering with the airway or if it is interfering with CPR.
- Control bleeding in the area surrounding the impalement without placing undue pressure on the foreign object.
- Clean and dress the wound.
- Wrap a bulky dressing around the object to keep it from moving.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Nasal Bleeding

Not usually life-threatening, except:

Airway concerns.

Severe bleeding can lead to shock.

Lean forward.

Pinch nostrils.

Apply pressure to the point under lip.

Keep quiet and calm.

Apply ice, if available.

- Severe nasal bleeding can lead to shock.
- The actual blood loss may not be evident because some blood goes down the throat and is swallowed.
- The head should be leaned forward to prevent blood from entering the throat.
- Blood entering the stomach can cause nausea, potentially leading to vomiting.
- Direct pressure can be applied by pinching the nostrils.
- If bleeding persists pressure can be applied to the pressure point located under the gums of the upper lip.
- Keep the victim quiet; anxiety will increase blood flow.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Bleeding from the Ears

Cover lightly.

Stopping bleeding worsens injuries.

- NYC CERT members should assess where the bleeding originated.
- Superficial bleeding from the ear is usually not life threatening.
- Bleeding from inside the ears can indicate an open head injury.
- NYC CERT members should not attempt to stop bleeding from inside the ear.
- Since the wound is a route for infection it should be covered lightly.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Eye Injuries

Cover eye
Disposable cup
Bandage both eyes
Sympathetic movement

- If transport is going to be delayed, lightly bandage the eye with a moist, sterile dressing.
- To protect the injured eye, cover it with a disposable cup or similar object.
- Bandage both eyes to prevent further damage caused by sympathetic movement.
- It is important that once a victim's vision is obstructed, a NYC CERT member or green tag victim should be assigned to assist this victim.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Practice Bleeding Control

- Team will break up into groups of partners to practice bleeding control.
- Equipment will be:
 - 1 - roll of gauze
 - 2 - 4x4 bandages
 - 2 – pairs of rubber gloves

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Fractures, Sprains, and Strains

- In this section we will discuss NYC CERT's roles in treating fractures, sprains and strains.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Fractures, Sprains & Strains

Can be difficult to immobilize properly.

Immobilize:

Injured area.

Adjacent joints.

- The treatment will be the same whether the injury is a fracture, sprain, or strain.
- The objective when treating a suspected fracture, sprain or strain is to immobilize the injury and the joints immediately above and below the injury.
- Immobilization can be very difficult without the proper equipment.
- A NYC CERT member may have to improvise with the material that is available on scene.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Fractures / Dislocations

Pain / tenderness

Swelling

Deformity

- A fracture is a complete break, a chip or a crack in a bone.
 - A closed fracture is a broken bone with no associated wound. First aid treatment may require only splinting.
 - An open fracture is a broken bone with some kind of wound that allows contaminants to enter into or around the fracture site. This type of injury is a high priority for treatment due to the risk of severe bleeding and infection.
- When treating an open fracture do not draw the exposed bone ends back into the tissue.
- Do not irrigate the wound. Cover the wound with a sterile dressing.
- Splint the fracture without disturbing the wound.
- A dislocation is a separation of a joint.
- A dislocation will show signs similar to that of a fracture and should be treated as such.
- A NYC CERT member should never try to relocate a suspected dislocation.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Sprains / Strains

Pain / tenderness

Swelling

Deformity

- A sprain is stretching or tearing of ligaments.
- A sprain is considered a partial dislocation. However, the bone either remains in place or snaps back into place on its own after the injury. A NYC CERT member should not treat the injury other than by immobilization and elevation.
- The most common signs of a *sprain* are:
 - Tenderness at the site of the injury.
 - Swelling and bruising
 - Restricted use or loss of use
- A strain is a muscle injury resulting from overstretching or overexertion of a muscle.
- Strains are difficult to distinguish from sprains and fractures without x-rays, therefore all of these injuries need to be treated by immobilization.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Types of Splints

Soft materials
Rigid materials
Anatomical

- Splinting is the most common procedure for immobilizing an injury.
- NYC CERT members may have to be creative in their use of improvised materials for splinting.
- An anatomical splint may be created by securing a fractured bone to a non-injured bone.
- Cardboard is a commonly used material. Others may include:
 - Soft materials: towels, blankets or pillows, tied with bandaging materials or soft clothes. Soft material may be used to fill the gap between the splinting material and the body part.
 - Rigid materials: metal, wood, folded magazines or newspapers and other rigid items.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Splinting Demonstration

- Support the injured area above and below the site of the injury.
- If possible, splint the injury in the position that you found it.
- A NYC CERT member should not try to realign the bones or joints.
- After splinting check for proper circulation (warmth, feeling, and color).

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Shock

- This section will discuss the indicators of shock and possible treatment by NYC CERT members.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Shock: Continued

Shock is caused by ineffective circulation of blood.
In trauma, shock usually occurs from blood loss.

- Shock is a disorder resulting from an ineffective circulation of blood. Remaining in shock will lead to the death of cells, tissues, and entire organs.
- The body will initially compensate for blood loss and mask the symptoms of shock.
- NYC CERT members should continually monitor and evaluate patients for signs of shock.

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FOR VISUALLY IMPAIRED USERS

Signs and Symptoms of Shock

Rapid, shallow breathing

Cool, pale, moist skin

Altered level of consciousness

Rapid heart rate

- NYC CERT members should look for the following signs of shock:
 - Rapid and shallow breathing;
 - Cool, pale, moist skin;
 - An altered level of consciousness (patient may be unable to follow simple commands);
and
 - A rapid heart rate.

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Treatment

Lay the patient down.

Raise legs six to ten inches.

Maintain airway.

Control bleeding.

Maintain body temperature.

Avoid rough handling.

- To treat for shock, a NYC CERT member should:
 - Lay the patient on his or her back.
 - Elevate the legs.
 - Maintain the patient's airway.
 - Control any obvious bleeding.
 - Maintain the patient's body temperature. A NYC CERT member should place a blanket over the patient and possibly under the patient as well to protect the patient from extreme ground temperatures.
 - Avoid rough or excessive handling of the patient.

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Treating Burn Injuries

- This section will discuss classification of burn injuries and associated treatment for each classification.

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Diagram of: Burn causes

Treating Burns

Cool the burned area.

Cover to reduce pain and infection.

- Heat, chemicals, electrical current, and radiation may cause burns. The severity of the burn will depend on the:
 - Temperature of the burning agent;
 - Period of time that the patient is exposed;
 - Area of the body that is affected;
 - Size of the burn area; and
 - Depth of the burn.
- The objective of first aid treatment for all burns is to cool the burned area and cover the area to reduce pain and the risk of infection.

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Diagram of: Layers of Skin

Epidermis

Dermis

Subcutaneous tissue (fat)

- Skin has three layers and depending on the severity, burns may affect all three layers.
 - The *epidermis* is the thin outermost layer of the skin containing nerve endings and is penetrated by hairs.
 - The *dermis* is the thick second or middle layer of the skin, which contains blood vessels, oil glands, hair follicles and sweat glands.
 - The *subcutaneous layer* is the third or innermost layer of the skin, which is primarily fat and blood vessels.

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Classification of Burns

First degree:

Epidermis

Reddened skin

Second degree:

Epidermis and dermis

White or red skin

Blisters

- First degree:
 - Similar to sunburn
 - Skin function is not compromised.
 - Not very dangerous, although it can be very painful.
- Second degree:
 - Part of the dermis has been burned.
 - Hot water scalds are a common form of second degree burn.
 - Sunburn can be bad enough to result in a second degree burn.
 - The burn will generally heal on its own. However, the skin will not function correctly until it is healed. The surrounding area is usually a first degree burn.

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Classifications of Burns

Third degree:

Extends into all layers

Skin dry and leathery

Little or no pain

- Third degree:
 - These burns involve the entire dermis and may extend into the subcutaneous tissue, or even deeper, involving muscle or bone.
 - Since the nerve endings are burned the patient may not experience any pain. However, the surrounding areas of first and second degree burns will feel pain.
 - Patient is at an extremely high risk for infection.
 - Third degree burns will not heal automatically and will require immediate medical treatment.

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Treatment

Stop the burning process.

Apply dry, sterile dressings.

Elevate.

Treat for shock.

DO NOT use ice.

DO NOT apply ointments

NO NOT remove tissue or break blisters.

- A NYC CERT member should:
 - Remove the patient from the source of the burn.
 - Stop the burning process.
 - Cover loosely with a dry sterile dressing to keep out air, reduce pain and prevent infection.
 - Treat all victims of third degree burns for shock.
- A NYC CERT member should **never** apply ice, antiseptics, ointments or any other “home” remedies.
- A NYC CERT member should **never** remove shreds of tissue, break blisters, or adhered particles of clothing. Burned-in clothing may be cut off around the burn.

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Environmental Emergencies

- This section will cover a variety of environmental emergencies that may be encountered not only in a disaster but also in everyday life.
- We will discuss NYC CERT's roles in diagnosing environmental emergencies and what can be done to minimize the impact of each emergency.

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Hypothermia

Very low body temperature

Decreased level of consciousness

Shivering:

Stops in late stages – very bad sign

Muscles rigidity / clumsiness

Numbness

- Hypothermia is defined as a core body temperature of 95°F or less. A body temperature below 95°F will produce visible shivering and an increase in heart rate, breathing rate and blood pressure.
- As the body temperature continues to drop, the pulse will slow and breathing rate and blood pressure will also decrease. You may notice clumsiness, slurred speech, and confusion.
- In a cold, dry environment, hypothermia can take place over a period of hours. In cold water, it can take place in minutes.
- The homeless, alcoholics, and mentally ill individuals are prone to hypothermia because they may be unable to find adequate shelter or may be unable to recognize when it is time to come in from the cold.
- The elderly, because of their impaired ability to produce and retain heat, may become hypothermic over a period of days while living in normal conditions that other people would find comfortable. Check on your elderly family and neighbors.

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Treatment

Remove wet clothing.

Protect from cold.

Do not ingest anything.

Note recovery position.

If conscious, apply heat packs in groin and / or armpits.

Be careful not to cause burns.

- Remove wet clothing and move the person indoors or to a warmer environment.
- Wrap the patient in blankets to warm them and place them in the recovery position: on their side with their knees drawn up towards their chest.
- Heat packs in the groin and/or armpits can help warm the blood.

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Frostbite

Freezing of affected area

Frostnip

Coldness

Stiffness

Pins and needles

No sensation

- Note that many people with frostbite may be experiencing hypothermia. Saving their lives is more important than preserving a finger or foot.
- Frostbite affects the extremities because blood flow to the extremities is reduced so the body can preserve the function of vital organs.

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Treatment

Remove all clothing and jewelry from the affected area.

Protect from cold.

Warm up using skin-to-skin contact or mouth.

DO NOT massage.

USE CAUTION when placing in front of heat source.

DO NOT break blisters.

- Remove all constrictive jewelry and clothes because they may further block blood flow.
- Move to a warm area to prevent further heat loss. Keep the affected part elevated to reduce swelling.
- Apply a dry, sterile bandage, place cotton between any involved fingers or toes (to prevent rubbing), and take the person to a medical facility as soon as possible.

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Heat Exhaustion / Heat Stroke

Temperature too high

Heat exhaustion = still compensating

Heat stroke = cannot compensate

- Heat exhaustion occurs when people exercise, work or play in a hot, humid place and body fluids are lost through sweating, causing the body to overheat.
- Heat stroke is life-threatening. The person's cooling system, which is controlled by the brain, stops working and the internal body temperature rises to the point where brain damage or damage to other internal organs may result (temperature may reach 105°F or more).
- Infants and the elderly are more likely to have this problem, as are those who are taking antihistamines and certain types of medication for high blood pressure and depression.

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Heat Exhaustion: Signs and Symptoms

Dizziness and / or weakness

Profuse sweating

Warm, pink skin = cool, pale skin

Headache

Nausea

- Heat exhaustion symptoms consist of paleness with cool, moist skin, sweating profusely, muscle cramps or pain, feeling faint or dizzy. Victims may complain of headache, weakness, thirst, and nausea.
- In cases of heat exhaustion, core temperature is elevated usually more than 100°F and the pulse rate is increased.
- Heat exhaustion can affect both victims and responders. Like with first responders, NYC CERT members should be rotated to minimize the effects of the heat on them.

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Treatment

Remove from hot environment.

Drink fluids:

Water

Gatorade*

Treat for shock as necessary.

- Treatment for heat exhaustion:
 - Rest in a cool, shaded area.
 - Provide cool fluids such as water or sports drink, which will replace the salt that has been lost.
 - Loosen or remove clothing.
 - Apply cool water to skin.
 - Treat for shock as necessary.
 - **Do not** use an alcohol rub.

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Heat Stroke: Signs and Symptoms

Unconscious

Hot, dry skin

May still be wet at first

Headache

Nausea

- Heat stroke symptoms may include:
 - Loss of consciousness or a markedly abnormal mental status including dizziness, confusion, hallucinations, or coma;
 - Flushed, hot, and dry skin although it may be moist initially from previous sweating or from attempts to cool the person with water;
 - Initially, slightly elevated blood pressure that falls later;
 - Hyperventilating; and
 - A body temperature of 105°F or more.

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Treatment

Cool patient quickly.

Do not place in ice water to prevent shivering.

Monitor airway / respiratory status.

- Treatment for heat stroke:
 - **Call 911 immediately.**
 - Move the person to a cooler environment, or place him or her in a cool water bath (as long as he or she is conscious and can be attended to continuously).
 - Alternatively, moisten the skin with lukewarm water and use a fan to blow cool air across the skin.
 - Give cool beverages by mouth only if the person has a normal mental state and can tolerate them.

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Questions?

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Disaster Medical Operations Review

First, do no harm
Greatest good for the greatest number
Responder, protect thyself!
Organization of operations
Triage
Patient assessment
Head and spinal injuries
Burns
Bleeding control and wound care
Fractures, sprains and strains
Shock
Environmental emergencies
Danger to responder

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LESSONS LEARNED

- Learn how to control bleeding and care for various wounds.
- Understand how to provide initial care for fractures, sprains, and strains.
- Identify and treat for shock.
- Understand NYC CERT's role and how the teams work during an incident.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message you might stress, learned this week, during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

The disaster simulation will have multiple parts for which you and your classmates will need to respond. Providing disaster medical operations will most likely be a big part of the disaster simulation, so it is important to understand the concepts and techniques. It is also important for you to understand how disaster medical operations fit into the Incident Command System structure. Practice, practice, practice.

EVALUATION

Please fill out the evaluation for Unit 6 in the back of the binder. When completed, please hand in to your OEM liaison.

UNIT RESOURCES

NYC OEM Website: www.nyc.gov/oem

FEMA CERT Curriculum: http://www.citizencorps.gov/programs/cert_detailed.shtm

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UNIT 7: FIRE SAFETY

UNIT INTRODUCTION

This module will focus on basic fire knowledge and safety, including the three ingredients needed to start a fire and then how to properly extinguish a fire. Participants will also practice the proper technique of using a fire extinguisher.

New York City Fire Statistics – 2012

- 70 civilians lost their lives as the result of fire.
 - Appliance: 3
 - Cooking: 7
 - Electrical/Device: 16
 - Heaters: 1
 - Hot objects: 3
 - Ignitables: 2
 - Incendiary: 7
 - Open Flame: 7
 - Smoking: 19
 - Other: 5
- 25,254 structural fires.
- 14,580 non-structural fires.

In NYC, fire deaths totaled 73 individuals in 2009. This was down 15% from 2008. The leading cause of death in 2008 was due to careless smoking. According to NYC Fire Commissioner Salvatore Cassano, the top three contributing factors to fires in NYC are candles, overloaded electrical circuits and careless smoking.

In this unit, we will discuss fire safety for you and your household. We will also discuss CERT roles during a fire-based deployment. During and immediately following a severe emergency, the major priorities of the FDNY are life safety and extinguishing major fires. In a major disaster, first responders may be taxed by the number of incidents or hampered by impassable roads, inadequate water supply or weather conditions. CERT may be asked to support the FDNY.

CERTs may be tasked to play a very important role in fire safety by:

- Extinguishing small fires before they become major fires. This unit will provide training on how to use an extinguisher to put out small fires—and how to recognize when a fire is too big for CERT members to handle.
- Preventing additional fires by removing fuel sources. This unit will also describe how to ensure that a fire, once extinguished, is completely extinguished.
- Shutting off utilities, when necessary and safe to do so, based on your CERT training.
- Assisting with evacuations where necessary. When a fire is beyond the ability of CERT members to extinguish, CERT members need to protect life safety by evacuating the area, when necessary, and establishing a perimeter.

When deployed, CERT members should remember the following:

- CERT member safety is always the number one priority.
- NYC CERT members should always work within the buddy system.
- Each member must wear safety equipment, including gloves, helmet and goggles.

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- Each member must operate within the scope of his or her CERT fire safety training.
- When operating a fire extinguisher, always operate with a back up safety team and ensure a safe means of egress.

UNIT OBJECTIVES

- Learn the chemistry of fire.
- Know how CERT teams can aid in fire prevention in their community.
- Understand CERT's role in fire suppression.
- Learn and practice safe fire extinguishing techniques.

UNIT REVIEW

Fires can happen anywhere, and at this point, you know some of the context of where they can start and spread, how to reach help and ways they can start (utilities). Keep in mind that you can prepare in your own home for fires by practicing evacuation routes, having a meeting place, and having your Go Bag ready!

LOOKING FORWARD

Building collapses can occur following fires, earthquakes, utility explosions, or even because the subway is rumbling beneath an unstable building. Next week you will learn basic light search and rescue techniques. While this is not training that will allow you to ever enter an unstable building or into an active disaster site, learning and knowing these skills may some day save your life.

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Fire Safety

- The intent of this unit is to familiarize students with the importance of fire safety and their personal ability to limit the spread of fire.
- We will also instruct students on the proper use of a portable fire extinguisher on a small fire.
- We will also discuss possible CERT roles during a fire.

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Unit Objectives

Understanding chemistry of fire
CERT role in fire prevention
CERT role in fire suppression:
Basic SIZE UP for a fire emergency
Extinguish small fires using a fire extinguisher.

- By the end of this unit you should be able to:
 1. Understand the chemistry of fire and its impact on sustaining combustion.
 2. Understand CERTs' roles in preventing fires in their communities.
 3. Understand the role of a CERT during a fire.
 4. Extinguish a minor fire using a portable dry chemical extinguisher.

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What is Fire?

Fire – a rapid oxidation process that creates light, heat, smoke and releases energy in varying intensities.

Components of Fire – Heat, Oxygen, Fuel, Unconstrained Chain Reaction

- Fire is a chemical reaction that requires three components to sustain combustion:
 1. Fuel (solid, liquid, or gas)
 2. Heat (required to elevate the temperature of the material to its ignition point)
 3. Oxygen (fire burns vigorously in any atmosphere of at least 20% oxygen)
- The removal of any one of these components will extinguish the fire.

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Diagram of: The Combustion Process

- The fire tetrahedron diagram illustrates the chemical reaction required to initiate and sustain combustion.
- The simplest example of this reaction would be a match and striker:
 1. The match stick acts as the fuel.
 2. The match dragging along the striker creates the heat.
 3. The oxygen exists in the air at a level of approximately 20%.
 4. The chemical reaction is the interaction of these three components working simultaneously to ignite and sustain combustion.

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Fire Demonstration

- Eliminating one portion of the fire triangle will extinguish the fire:
 - Closing a door to the room that is engulfed in fire begins to eliminate the oxygen within the room.
 - Placing water on the fire will cool the heat component and will extinguish the fire.
 - Removing the fuel source will extinguish the fire.

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The Growth of Fire

- A fire doubles in size every 30 seconds.
- Smoke detectors within the apartment may not activate until the fire is burning for several minutes.
- Once a fire is detected, you should immediately close the door to the fire area to limit its spread.
- If the fire is any bigger than a waste paper basket or beyond the capability of a fire extinguisher, the occupants should immediately leave, closing the door behind them to limit the spread of the fire.
- The occupants should call 911 and attempt to meet first responders in a safe place as they arrive to relay important information about the fire or the occupancy of the building.

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CERT Roles

Extinguish small fires.

Prevent the spread of fires.

Prevent additional fires.

Assist with evacuations where necessary and possible.

- CERT members should examine each emergency and determine which tasks are within the scope of their training and safety and will have the greatest impact on the largest number of people.
- Extinguish small fires prior to their exponential growth.
- Attempt to limit the spread of fires that cannot be extinguished by a portable extinguisher.
- Prevent evacuees from blocking exits and stairwells once they have reached a safe area.

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Potential Fire Hazards and How to Control Them

- Knowing potential fire hazards and the ways to control them increases your personal awareness of fire safety.
- We will also discuss CERT roles in limiting potential fire hazards within their community by educating others on the risks.

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Electrical hazards
Natural gas hazards
Flammable liquids
Human factor

- These are four types of hazards that contribute to accidental fires.
- These resources are a part of every day life, but when they are used improperly or overloaded beyond their limits they can initiate or expand an existing fire.
- Recognizing the dangers of these four hazards will help in limiting their potential danger.

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Electrical Hazard Control

Avoid running extension cords under carpets.

Use licensed electricians.

Label fuses or circuit breakers.

Avoid overloading circuits

- The items above are common hazards found in many homes.
- Running electrical cords beneath a carpet causes the insulation to break down over time. This will eventually heat the carpet which will break down its fibers and cause it to ignite more easily.
- Unlicensed electricians may install wiring or appliances that do not meet NYC code requirements which can lead to many potential hazards such as:
 1. Overloaded circuits;
 2. Improper circuit breaker size;
 3. Improper connections; and
 4. Overheated wiring.
- Labeling circuit breakers will enable you to isolate the problem quickly.
- Do not enter a flooded basement to shut off the electrical supply as water may conduct electricity.

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Natural Gas Hazard Control

Install a natural gas detector.
Locate and label gas shut-off valve.

- Natural gas leaks can be detected by a noticeable odor of rotten eggs; this is an additive known as mercaptan which is added by the gas company so the leak can be detected at extremely low levels. Natural gas has no odor.
- In the event of a gas leak the mercaptan may be scrubbed out as natural gas seeps through the ground, thereby eliminating the odor, leaving it unnoticeable and only detectable by a gas detector.
- If gas valves are labeled, they can be easily located during an emergency and quickly closed to mitigate the disaster.
- A natural gas fire should only be extinguished if you can shut off the gas source safely.
- If a gas leak cannot be controlled, the fire will be allowed to burn and the surrounding area will be made safe by wetting it down.
- Two hazards associated with a natural gas leak:
 1. Asphyxiant that robs the body of oxygen
 2. Explosive that can easily ignite

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Natural Gas Hazard Control

¼ turn valve:

Is this valve open or closed?

Which way is the gas flowing?

- There are several types of gas valves used, but the most common is the ¼ turn valve.
- Gas valves can be found in many locations:
 - Behind an appliance
 - In the ceiling
 - At the meter or
 - Where the gas enters the building.
- When the valve is in line with the pipe, it is open.
- When the valve is perpendicular to the pipe, it is closed.
- Many valve stops are broken so do not turn beyond the ¼ turn or you may reopen the valve.
- Always attempt to shut off the gas as close to the leak as possible.

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Flammable Liquid Hazards

Read labels.

Use L.I.E.S storage procedures:

Limit

Isolate

Eliminate

Separate

Dispose of expired or empty cans properly.

- CERT members should be aware of labels that identify flammable products.
- Liquids should be stored in the proper container. Some liquids may have a reaction to a container if stored in something other than what they are meant to be stored in.
- Dispose of flammable liquids that may be expired. Consult 311 for instructions on how to dispose of these items safely.
- A trained CERT member should use the LIES acronym when it comes to storing flammable liquids:
 - **L** Limit
 - **I** Isolate
 - **E** Eliminate
 - **S** Separate

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Flammable Liquid Hazards

- This video will demonstrate how dangerous a flammable liquid fire can become and how quickly conditions can change.
- A flammable liquid fire should be extinguished by using a portable fire extinguisher that is rated for flammable liquid fires. (Fire extinguisher safety and ratings will be addressed later in this unit).
- A flammable liquid fire in a cooking pan may be extinguished by placing the lid over the pan if possible.

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The Human Factor

Key Points

- You can play a part in fire safety.
- NYC CERT members should work to educate their communities about fire safety.

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Cooking
Careless Smoking
Candles
Arson

- COOKING is the leading cause of home fires and injuries in the United States. Cooking fires often result from unattended cooking and human error, rather than mechanical failure of stoves or ovens.
- CARELESS SMOKING is the leading cause of fire deaths. Smoke alarms, smolder-resistant bedding and upholstered furniture are significant fire deterrents.
- HEATING is the second leading cause of residential fires and ties with arson as the second leading cause of fire deaths. Heating fires are a larger problem in single family homes than in apartments. Unlike apartments, the heating systems in single family homes are often not professionally maintained.
- CANDLES must be used with tremendous care. They should be kept on a stable base, away from other flammables.
- ARSON is the third leading cause of residential fires and the second leading cause of residential fire deaths. In commercial properties, arson is the major cause of deaths, injuries, and dollar loss.

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Fire Safety Size-Up

- Every CERT operation begins with a competent size up.
- When it comes to sizing up a fire, a good rule of thumb for CERT members is if the fire is bigger than a waste paper basket, it is too big for CERT members to attempt to extinguish.

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Size-Up

Has the FDNY / 911 been contacted?

Can the fire be extinguished safely?

Do we have the right equipment?

Are there other hazards?

Is the building structurally damaged?

Can we escape safely?

- Before CERT members attempt to use a fire extinguisher, they should consider the following:
 - Has 911 been contacted?
 - Can this be done safely?
 - Do we have the proper extinguisher and equipment?
 - Are there other hazards that we should be aware of?
 - Is the building structurally safe and sound?
 - Do we have an escape route planned?

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Identifying Hazardous Materials

Diagram of: Various warning symbols and their colors

- Scene safety is important in any emergency situation, but especially so in HAZMAT (hazardous materials) incidents.
- CERT members should be aware of the warning signs that may indicate hazardous materials.
- HAZMAT warning placards should serve as a **stop sign** for CERT members.
- CERT members should attempt to collect as much information as possible for first responders including placard numbers, shapes and colors.
- CERT members should be reminded that they should be positioned at a safe distance which is uphill, upwind, and upstream during any type of HAZMAT incident.

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CERT Firefighting Resources

*Portable fire extinguishers

*Creative resources:

Blankets – wet or dry

Baking soda

Sand

Water buckets

*Confinement

- The most likely firefighting resource for CERT members is a fire extinguisher.
- Pots or buckets of water may also be used.
- Another action that CERT members may consider is to confine the fire and restrict the threat of smoke and heat by closing doors.
- CERT members are not trained to operate standpipe hand lines and using them should **never** be considered by CERT members and teams.

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Selecting Appropriate Extinguisher

- A NYC CERT member must have received training in the operation of a fire extinguisher and be properly equipped with personal protective equipment before considering the use of a fire extinguisher.
- CERT members should operate using the buddy system as well as a back-up team when placing fire extinguishers into operation.
- To overhaul means to examine thoroughly or to haul or turn over the material which was on fire.
- Remember to overhaul to ensure that the fire has truly been extinguished.

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Types of Fire Extinguishers

Water
Dry chemical
Carbon dioxide
Specialized fire extinguisher

- The two most common types of extinguishers are water and dry chemical.
- For the average homeowner, the dry chemical extinguisher will be most versatile.
- A multipurpose dry chemical extinguisher will have a mono-ammonium phosphate base and is effective on Class A, B, and C fires.
- Common characteristics of a dry chemical extinguisher include:
 - Capacity (approximately 10-20 seconds discharge time depending on the weight of the extinguisher)
 - Range (8 – 10 feet)
 - Pressure (standard pressure is 175-250 psi)

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Fire Classifications with Agents and Methods of Extinguishing

Class A fire = Flammable liquids: Extinguishing Agent: Water = Removes heat

Class A fire = Flammable liquids: Extinguishing Agent: Foam = Removes oxygen and heat

Class A fire = Flammable liquids: Extinguishing Agent: Dry Chemical = Breaks chain reaction

Class B fire = Electrical Equipment: Extinguishing Agent: Foam / CO2 = Removes oxygen

Class B fire = Electrical Equipment: Extinguishing Agent: Dry chemical = Breaks chain reaction

Class C fire = Combustible Materials: Extinguishing Agent: CO2 = Removes oxygen

Class C fire = Combustible Materials: Extinguishing Agent: Dry Chemical = Breaks chain reaction

Class D fire = Fire Safety = Extinguishing Agents: Special Agents = Usually remove oxygen

- To aid in choosing the correct extinguisher, fires are categorized into classes based on the type of fuel that is burning:
 - Class A – ordinary combustibles such as paper, cloth, wood, rubber.
 - Class B – flammable liquids such as oils, gasoline, kerosene.
 - Class C – energized electrical equipment such as wiring or motors.
 - Class D – combustible metals such as aluminum or magnesium.

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FOR VISUALLY IMPAIRED USERS

Illustration of: A UL Certification Label

- The UL on the label indicates Underwriters Laboratories. UL is a privately-owned and operated product safety testing and certification organization. UL develops standards and test procedures for products, materials, components, assemblies, tools and equipment, chiefly dealing with product safety. UL is one of several companies approved for such testing by the Occupational Safety and Health Administration (OSHA – the main federal agency charged with the enforcement of safety and health legislation).
- Fire extinguishers are rated based on their effectiveness on different classes of fires. Every household extinguisher will be labeled A, B, or C which tells you which types of fires the extinguisher is effective against. For example: B is for flammable liquids such as gasoline or cooking oil.
- In the fine print on the label the letters are preceded by numbers. In the example in the slide the numbers are 3A:40B:C which are the extinguisher's classification rating. These numbers are assigned by UL. The higher the number the greater the effectiveness.
- The numbers on the label represent the area the extinguisher will cover. Class A is measured in cubic feet (1A equals 8 cubic feet.) Class B fires are measured in square feet (10B equals 10 square feet – 1B can extinguish 1 sq. ft. of flammable liquid). There is no area measurement for Class C. It means that the extinguisher's chemicals will not conduct electricity.

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Diagram of: The Anatomy of an Extinguisher

Pin
Trigger
Pressure Gauge
Label
Hose
Cylinder

- The cylinder holds the extinguishing agent and needs to be pressure-tested every five years.
- The pressure gauge indicates whether the extinguisher is charged. The gauge is color coded and green means go.
- The label will tell you what type of extinguisher it is and if it is UL rated.
- The pin needs to be pulled to allow the trigger to be operated.
- The hose should be aimed at the base of the fire.
- The trigger needs to be squeezed.
- The hose needs to be swept across the base of the fire.

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Extinguisher Operation

P.A.S.S

Pull

Aim

Squeeze

Sweep

Always test the extinguisher before approaching any fire!

- Before attempting to extinguish a fire, check the pressure gauge to be sure the extinguisher is charged and squeeze the trigger to quickly test it.
- Make sure you are between the fire and your primary means of egress.
- Always operate a fire extinguisher in the upright position.

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Extinguishment Considerations

(Ask instructor to explain diagram in detail)

Ask yourself,

“Can I escape quickly and safely from the area if I attempt to extinguish the fire?”

If no, leave immediately.

If yes, ask yourself, “Do I have the right type of extinguisher?”

If no, leave immediately.

If yes, ask yourself, “Is the extinguisher large enough for the fire?”

If no, leave immediately.

If yes, ask yourself, “Is the area free from other dangers such as hazardous materials and falling debris?”

If no, leave immediately.

If yes, EXTINGUISH THE FIRE!

- You must answer yes to all the above questions before you attempt to extinguish a small fire.
- Even if you answered yes to all the above questions but you feel overwhelmed by the fire, close the door to the fire area and get out immediately.

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Close the Door but Do Not Lock

- By closing the door to the fire area, you are minimizing the spread of the fire and possibly saving lives.
- By minimizing the fire area, you are making extinguishing the fire easier for the FDNY.

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Safety Rules

- Don't forget the CERT number-one priority: SAFETY, SAFETY, and SAFETY - both your personal safety and the overall team safety.
- We must operate as safely as possible because if one of our team members gets injured, we have now become part of the problem.
- We only attempt to extinguish small fires (smaller than a waste basket).
- When extinguishing a fire, place yourself between the fire and your exit.

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Fire Suppression Safety

Do:

Use safety equipment.
Work in a buddy system.
Have a backup team.
Have two ways to exit.
Utilize reach of extinguisher.
Overhaul the fire.

- Wear all your personal protective equipment. If you cannot adequately protect yourself, close the door to the fire area and get out immediately.
- We always look out for one another using the buddy system. Use both sets of eyes to look for danger and protect one another.
- Don't get too close to the fire. Use the reach of the extinguisher to maintain a safe distance.
- When the fire appears to be extinguished, stir up the ashes to ensure there are no smoldering embers.

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Fire Suppression Safety: Continued

DO NOT:

Get too close.

Fight it alone.

Enter smoke-filled areas.

Try to suppress large fires.

- If you can feel the heat of the fire, you are too close. Use the reach of the extinguisher to protect yourself by maintaining a safe distance.
- Do not enter a smoke-filled area. NYC CERT members are not equipped with masks to protect them from carbon monoxide (CO) and other toxins found in smoke.
- NYC CERT members are trained to extinguish small fires no bigger than a wastepaper basket.
- Never fight a fire alone. Fighting fires is dangerous and should be undertaken only when using the buddy system.

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Universal Considerations

Be aware of personal and team safety.

Call 911 and relay:

Location (address, apartment number, floor, etc.).

Victims (if known).

Size of fire.

Follow CERT protocols.

Reduce panic and confusion.

Be aware of equipment availability.

- Size-up the hazards of the incident and gather information as safely as possible.
- Call 911 and provide emergency responders with as much information as you can gather.
- Do not act beyond your NYC CERT level of training.
- Be prepared to provide emergency responders with information when they arrive on scene.
- Providing other civilians with information on what to do will ease panic and may protect them from injury.

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Fire Safety Tips

- Install and maintain smoke detectors in your home.
- Install and maintain CO detectors in your home.
- Create and practice a family fire escape plan.

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Smoke Detector Safety Tips

Install and maintain smoke / carbon monoxide (CO) detectors:

On each level of your home.

Outside each sleeping area.

Test once a week.

Replace batteries twice a year.

Never take the battery out for other uses!

- Smoke and CO detectors should be installed on each level of your home.
- These detectors should be installed in the vicinity of all sleeping areas.
- Test weekly.
- Ensure that batteries are replaced twice a year – a good time to do this is when we adjust our clocks for Daylight Savings Time in the spring and in the fall (“spring forward, fall back”).

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Fire Safety Tips

Maintain access to exits.
Use electricity safely.
Install a natural gas detector.
Practice candle safety.
Store flammables properly.
Plan and practice escape route(s).

- Be sure your exits are not cluttered or blocked by furniture, bicycles, or locked gates that require a key to open. If you must have gates on your fire escape window, be sure the lock can be opened **without** the use of a key.
- Do not overload electrical circuits. Power strips are not necessarily your friend. They encourage people to plug too many appliances into one receptacle. This is a very serious fire hazard.
- Do not store flammables anywhere they may come in contact with a source of ignition.

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FOR VISUALLY IMPAIRED USERS

Plan and Practice your Escape

Diagram of: a House Floor Plan

- Create a fire escape plan and practice it with your family at least twice a year. This can be done when you change the batteries in your smoke and CO detectors.
- Make sure everyone in your family knows two ways to get out of your home.
- Pick a meeting place outside your home. Once you get out, do not go back in.
- If you encounter smoke, use your secondary exit. If both exits have smoke, stay low and crawl below it. The cleanest air will be closest to the floor.

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Possible CERT Actions

Perimeter and traffic and crowd management.
Communication with evacuees and FDNY Command Post.
Evacuation of surrounding buildings.
Community outreach and information dissemination.
Sheltering
Food and water distribution.
Language interpretation.

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LESSONS LEARNED

- Learn the chemistry of fire.
- Know how CERT teams can aid in fire prevention in their community.
- Understand CERT's role in fire suppression.
- Learn and practice safe fire extinguishing techniques.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message you might stress, learned this week, during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

Fire safety will be one of the first things you will need to prioritize during the disaster simulation. Remember the safety protocols and how to extinguish using proper techniques.

UNIT RESOURCES

NYC FDNY website: www.nyc.gov/fdny

NYC OEM Website: www.nyc.gov/oem

National Fire Protection Administration: www.nfpa.org

CERT Fire Size up Checklist

Yes

No

Step 1: Gather Facts

Time

- Does the time of day or week impact fire suppression efforts?

☐☐

How?

Weather

- Will weather conditions impact your safety?

☐☐

If yes, how will your safety be affected?

- Will weather conditions affect the fire situation?

☐☐

If yes, how will the fire situation be affected?

Type Of Construction

- What type(s) of structure(s) are involved?

- What type(s) of construction are involved?

CERT Fire Size up Checklist

	Yes	No
--	-----	----

Step 1: Gather Facts (Continued)

Occupancy

- | | | |
|--------------------------------|--------------------------|--------------------------|
| ▪ Are the structures occupied? | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------|--------------------------|--------------------------|

If yes, how many people are likely to be affected?

- | | | |
|--|--------------------------|--------------------------|
| ▪ Are there special considerations (e.g. children, elderly)? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

Hazards

- | | | |
|-------------------------------------|--------------------------|--------------------------|
| ▪ Are hazardous materials involved? | <input type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------|--------------------------|--------------------------|

- | | | |
|---|--------------------------|--------------------------|
| ▪ Are any other types of hazards likely to be involved? | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

If yes, what other hazards?

Step 2: Assess and Communicate the Damage

- | | | |
|--|--------------------------|--------------------------|
| ▪ Take a lap around the building. Is the damage beyond the CERT team's capability? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

- | | | |
|--|--------------------------|--------------------------|
| ▪ Are normal communication channels functioning? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

CERT Fire Size up Checklist

Yes

No

STEP 3: CONSIDER PROBABILITIES

Life Hazards

- Are there potentially life-threatening hazards? ☐ ☐

If yes, what are the hazards?

Path of Fire

- Does the fire's path jeopardize other areas? ☐ ☐

If yes, what other areas may be jeopardized?

Additional Damage

- Is there a high potential for more disaster activity that will impact personal safety? ☐ ☐

If yes, what are the known risks?

STEP 4: ASSESS YOUR OWN SITUATION

- What resources are available with which you can suppress the fire?
- What equipment is available?

CERT Fire Size up Checklist

Yes

No

STEP 5: ESTABLISH PRIORITIES

- Can fire suppression be *safely* attempted by CERT members?

☐☐

If no, do *not* attempt suppression.

- Are there other, more pressing needs at the moment?

☐☐

If yes, list.

STEP 6: MAKE DECISIONS

- Where will deployment of available resources do the most good while maintaining an adequate margin of safety?

STEP 7: DEVELOP A PLAN OF ACTION

- Determine how personnel and other resources should be deployed.

CERT Fire Size up Checklist

Yes

No

STEP 8: TAKE ACTION

- Put the plans into effect.

STEP 9: EVALUATE PROGRESS

- Continually size up the situation to identify changes in the:
 - Scope of the problem.
 - Safety risks.
 - Resource availability.
- Adjust strategies as required.

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UNIT 8: LIGHT SEARCH & RESCUE

UNIT INTRODUCTION

This module will focus on how CERT teams might approach a disaster scene and safely respond. Initial damage assessment and preparing your team to deploy is vital to everyone's safety. Knowing how to complete a size-up is the next step, followed by a plan of action. Members will learn basic search and rescue techniques and what items will be helpful in rescuing and assisting survivors.

UNIT OBJECTIVES

- Understand the role of CERTs in a search and rescue emergency.
- Know how to complete a damage assessment and set up your team in ICS to deploy and be a resource.
- Know how to properly complete a size-up before acting on a plan.
- Learn and practice basic search and rescue techniques with proper materials.

UNIT REVIEW

The techniques you learned in disaster medical operations may be used following the techniques you learn tonight. Also remember your ICS structure and how it relates to the information in this unit.

LOOKING FORWARD

Next week you will learn how to direct traffic and raise your awareness of terrorism. A terrorist attack may be an explosion with an improvised explosive device (IED) or involve chemicals. Your knowledge of light search and rescue, triage, and the transportation systems in NYC will prepare you for emergencies and disasters that may occur.

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Light Search & Rescue Operations

- The intent of this unit is to familiarize CERT members with the various types of collapses and the indicators of each type.
- We will also discuss possible CERT roles during a collapse.
- Students will participate in a hands-on exercise. You will practice removing trapped victims and learn the proper carrying methods for removing the victims from a danger area.

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Unit Objectives

Understand:

Damage assessment
Team preparation
Safety and size-up
Plan development
Search techniques
Rescue and removal

- By the end of this unit you should be able to:
 - Assess the damage of a structure based on the characteristics of the exterior of the building.
 - Understand the importance of team preparation and safety.
 - Develop a plan based on the size up of the situation.
 - Use search techniques to maximize efficiency and limit time within the structure.
 - Practice hands-on rescue and removal techniques.

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Role of CERT

In the absence of first responders, rescue the greatest number of people in the shortest amount of time.
Confine **interior** efforts to **light** search and rescue only.

- The primary role of CERTs at a collapse incident should be to remove able bodied victims from the collapse zone. This should be done without entering the danger zone.
- Interviewing occupants can assist in determining the number of victims within the structure as well as their location prior to collapse.
- CERT members may only enter a structure if the damage caused by the collapse is considered light.
- If the damage is other than light, CERT members should only operate outside the collapse zone.

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Team Preparation

Pre-incident activities

Planning:

Assess probable needs, risk, and resources before a disaster strikes.

Developing an action plan that takes these factors into account.

Training and Drilling:

Classroom training

Hands-on training

Table top exercises

- One of the most important aspects of any emergency is proper planning.
- Anticipating needs prior to the disaster allows the team to develop strategies to address the most common tasks associated with a collapse.
- Once CERT members understand the technical knowledge associated with collapse assessment and rescue they must participate in hands-on exercises so they can test the practical application of their training.

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Safety

- The safety of the team and individual CERT members is your number one priority.
- No CERT member should operate in an unsafe environment.
- All team members should constantly assess the safety of the situation due to rapidly changing conditions and relay this information to the CERT lead.
- Safety is the responsibility of every member of the team and if an unsafe act is observed, it should be stopped immediately.

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Safety Considerations

Risk verse Reward

Your safety is #1 concern.

CERT risk level should not exceed training and resources.

Don't allow potential reward to cloud risk assessment.

- CERT safety is *always* your primary consideration at any emergency.

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Frequent Causes of Rescuer Death

Frequent causes of rescuer death:

Disorientation
Secondary collapse

- Responders and others may become disoriented during a collapse because the normal layout of the area is dramatically disrupted.
- Secondary collapse can occur any time after the initial collapse and may occur without warning.
- Once a building experiences a collapse resulting in moderate or heavy damage, the structure is considered compromised and CERT members shall not enter the building or the collapse zone.

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Safety Considerations

Maintain site safety:

Stop all traffic in immediate area.

This helps minimize vibrations which may cause a secondary collapse.

Keep onlookers at a safe distance.

Only trained personnel are allowed in a danger zone.

- Vibrations caused by vehicle or train traffic near the collapse area may cause a secondary collapse.
- NYC CERT members should consider:
 - Notifying the proper authorities, including 911 and OEM Watch Command.
 - Redirecting all traffic near the collapse area while maintaining access for incoming emergency vehicles.
 - Closing the entire block to vehicular and pedestrian traffic.

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Safety Considerations: Continued

Use the Buddy System.

Always work in pairs!

- NYC CERT members should always work using the buddy system.
- All first responders are required to operate using a two in and two out response that requires the following:
 - When entering a dangerous area you must work in close proximity to another member.
 - If one member must leave the area then both members must leave together.
 - Safety team members must be available outside the danger area in case members require assistance.
- NYC CERT members should consider using pairs of runners to deliver critical information back to the CERT operations section or the CERT lead.

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Safety Considerations: Continued

Hazards:

Sharp objects

Dust

Hazardous materials

Power lines

Leaking natural gas

High water

Fire hazards

Unstable structures

Collapse zone

- There are numerous hazards associated with any collapse.
- It is impossible to list all of the hazards; the list above includes those that are most commonly found.
- Proper size-up and protective equipment can limit the potential dangers of the hazards.
- Unless we can identify all the hazards associated with the collapse it is impossible to determine if it is safe for us to operate so we must perform a thorough size-up before determining our course of action.

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The “Collapse Zone”

- The collapse zone is considered the distance equal to the total height of the structure.
- Debris from the collapse can bounce much further than that distance.
- Some collapse manuals have listed the collapse zone as one and a half times the total height of the structure to allow for bouncing debris.
- When making decisions about your safety, NYC CERT members should use the zone of one and a half times the height of the structure.

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Safety Considerations

Rotate Teams:

Have back-up teams available.

Monitor the length of exposure of working teams.

Establish regular search and rescue shifts or rotate personnel as needed.

- Due to the strenuous tasks associated with operating at a collapse, CERT members may become fatigued quickly.
- As individuals become tired, they will be more inclined to bypass safety measures and make unsafe decisions contrary to their training.
- Since fatigue is one of the most common and dangerous hazards at any emergency, the CERT lead should rotate personnel prior to members becoming fatigued.
- Recorders should assist in documenting the work times of team members and notify the CERT lead of these times at regularly.

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CERT Exercise

Assemble into groups.

Each group must explain the role of the following positions at a light search and rescue incident:

CERT Lead, Operations, Logistics, Recorder and Staging Area Manager.

How will your resources be used at a light search and rescue operation?

Use a recorder to document your answers.

Select a spokesperson to report out.

- Prior to any team deployment, ICS roles must be established and members be placed in groups maintaining a manageable span of control (1:5).
- Understanding the roles of each position and being disciplined to remain in only that role is a critical component of a successful operation.
- The CERT lead must consider the number of resources required to free any one victim and determine if the strategy will provide the greatest good for the largest number of people.
- Recorders document the team structure and resources available to assist the CERT lead in determining what strategy may be used during a collapse.

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Required Safety Equipment

Helmet and Vest
Goggles and Dust mask
Whistle
Leather Work Gloves
Flashlight
Spray Paint
Appropriate Clothing
Official OEM CERT ID

- The above list contains the minimal amount of safety equipment required by any NYC CERT member that is deployed.
- No member will be allowed to leave the assembly area without proper protective equipment and official NYC CERT ID.
- The CERT lead is responsible to ensure that each member meets the above requirements. This may be delegated to group leaders.

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Size-Up

- Size-up involves assessing the situation and determining a safe plan of action.
- Size-up starts at the beginning of any operation and will be on-going for the duration of the operation. It is the part of the process and not a single event.
- Size-up should be done by all NYC CERT members and is not solely the responsibility of any one member.

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Step 1: Gather Facts

The time of day?

The day of the week?

What is the weather?

Where are people located? Sleeping? At work?

- Size-up begins by gathering the facts.
 - What happened or is happening?
- The facts of the situation will guide search and rescue efforts.
- The time of the event and the day of the week are very important in the assessment:
 - Where are victims likely to be? What rooms are they likely to be in during different times of the day?
 - In the evenings, the greatest need for search and rescue will be in residential buildings. During daytime a priority may be searching commercial office space.
 - Will daylight be a factor in the assessment of the ability to conduct a search? How much daylight is available? Do we have alternative lighting?
 - How will the weather affect the assessment or size-up and therefore rescue efforts? How will it affect victims? You may have to factor in:
 - Wind
 - Rain
 - Temperature and
 - Rising waters.

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Step 1: Gather Facts: Continued

Occupancy Type:

Commercial

Parking Garage

Single Family Home

- The purpose for which the occupancy was designed may indicate the likely number of victims and their location (e.g. single family home, multi-family dwelling).
- Some types of construction are more susceptible to collapse than others.
- The age of the structure should be a consideration in assessment. New York City's infrastructure is aging and may be susceptible to compromise or collapse.
- NYC CERT members should be aware of the hazards relating to secondary collapse.

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Step 1: Gather Facts: Continued

Pictures of: Other hazards

- Knowledge of other potential hazards in the general and immediate areas is important in size-up and will most definitely affect search and rescue efforts.
- NYC CERT members should consider the following before initiating any search and rescue actions:
 - What and where are the general hazards in the area?
 - Utilities such as gas and electric;
 - Natural hazards; and
 - Hazardous materials in the area.
- During the CERT size-up of any search and rescue effort it must be emphasized that the acceptable level of risk analysis on the part of any CERT member is “zero” or none.
- NYC CERT members should focus on those activities which may aid victims and first responders while not endangering themselves or any other member of the team.

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Step 1: Gather Facts: Continued

Causes of Secondary Collapse:

Weather
Wind
Rain
Snow
Increased floor load
Vibrations
Trains
Trucks and Buses
Fires

- An important part of size-up is the risk of secondary collapse.
- While assessing any structure for damage, the safest approach is from the flanks so that you are walking toward the corners of the building and not directly in front of the walls which would be considered the collapse zone.
- Some causes of secondary collapse include:
 - Weather – rain or snow
 - Fire – the burning away of structural members compromising structural integrity
 - Increased load within the building
 - Vibrations – anything from an earthquake to the subway, trucks, or buses passing

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Steps 2: Assess Damage to the Building

Light damage:

Superficial or cosmetic damage

Broken windows

Fallen plaster

Primary damage to contents of structure

- A lightly damaged building will have superficial or cosmetic damage only.
- Damage may include broken windows or falling plaster.
- Debris may include dropped ceilings, plaster, or wood.
- Contents may include shelving, bookcases, and fallen stock.
- NYC CERT members may be asked to operate in a lightly damaged building to perform search and rescue.
- The objective of the CERT team will be to locate, stabilize, and immediately evacuate victims to a safe area while minimizing the number of rescuers inside of the structure.

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Step 2: Assess Damage to the Building: Continued

Moderate damage:

Questionable structural stability, fractures, tilting, foundation movement or displacement

Avoid collapse zone.

No interior operations

- NYC CERT members shall not conduct any operations inside of a moderately damaged building.
- A moderately damaged building is one of questionable stability. Features may include fractures or cracks in the exterior walls, tilting or leaning, as well as possible foundation movement or displacement.
- NYC CERT members should be aware and avoid the collapse zone around the building. All CERT operations should be conducted from a safe area outside of the collapse zone.
- NYC CERT members should consider the following actions:
 - Tape off the collapse zone and warn others of the danger.
 - Conduct a perimeter survey for victims.
 - Interview bystanders.
 - Call out to possible victims inside of the structure.
 - Relay this information to first responders.

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Step 2: Assess Damage to the Building: Continued

Heavy damage:

Obvious structural instability; partial or total wall collapse, ceiling failures

Avoid collapse zone

No interior operations

- NYC CERT members shall not conduct any operations inside of a heavily damaged building.
- A heavily damaged building will have obvious structural instability. There may be a total collapse of the structure or a partial collapse of walls, ceilings, or floors. The building may be filled with fire, smoke, or hazardous materials inside.
- NYC CERT members should secure the building perimeter as mentioned earlier and warn others of the danger that exists.

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Step 3: Identify Your Resources

Diagram of: People + Tools + Time = Resources

- The size-up of any search and rescue operation for a NYC CERT member should include an identification and evaluation of available resources.
- NYC CERT resources include people, tools, and time:
 - People can serve as both trained rescuers and support personnel.
 - Tools will depend on availability and the needs of the situation.
 - Time may be limited for some victims.
- The first 24 hours after a disaster has been referred to as the “Golden Day” or the period during which injured or trapped victims have an 80 percent chance of survival.

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Summary

If structural damage is **Light** then the CERT mission is to locate, triage, and prioritize removal of victims to designated treatment areas by the medical operation teams.

If structural damage is **Moderate** then the CERT mission is to locate, stabilize, and immediately evacuate victims to a safe area while minimizing the number of rescuers inside the danger area.

If the structural damage is **Heavy** then the CERT Mission is to secure the building perimeter and warn others about the danger of entering the building.

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Developing an On-Site Search and Rescue Plan

- The development of an on-site search and rescue plan is a prerequisite to any light search and rescue response.
- Safety of yourself and your team members remains your number one priority.

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On-Site Rescue Plan

Plan your light search and rescue operations in advance.

CERT's role mainly on perimeter

Size-Up

Light S&R on perimeter

Traffic and crowd control

Transfer of command

Plan may have to be altered at any time due to extra or insufficient resources or personnel.

- NYC CERT members should prepare their team for operations relating to light search and rescue.
- These activities may include:
 - Designating possible light search and rescue group leaders.
 - Gathering tools or equipment.
 - Developing possible methods of transporting equipment to the scene.
 - Practicing cribbing and lifting methods within the scope of CERT training.
- Any plan should be flexible to meet the needs of a changing situation.

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Search Techniques

- NYC CERT members can employ search techniques to assist victims that may be trapped under light debris or unable to extricate themselves due to injury.
- Keep in mind that all NYC CERT members must maintain situational awareness at these incidents due to dynamic and quickly changing conditions.

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Search Methodology

An effective search methodology:
Is systematic and thorough.
Avoids unnecessary duplication of effort.
Provides for documentation of search results.

Key Points

- NYC CERT must establish a plan before entering a location to search for victims.
- Members do not want to duplicate the efforts of others; this is inefficient and exposes searchers to unnecessary danger.
- Make sure the search team records the results of its searches in all areas. This information will be provided to emergency responders during the transfer of command.

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Locating Potential Victims

Call out.

Be systematic:

Bottom-up or top-down

Right wall or left wall

Around the clock

Listen carefully

Triangulate

Interview witnesses

- Call out to victims as they could be concealed by debris but may be able to respond to your call.
- Decide on what search pattern to use as a team and record the results of the search effort.
- Be sure to position members at different locations throughout the search area and listen carefully for responses or tapping sounds.
- Talk to surviving occupants to see if they can provide information on the last known location of possible victims.

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Areas of Entrapment

Another term for areas of entrapment are:

Voids:

Pancake collapse

Lean-to collapse

V-Shaped collapse

CERT should **NOT** enter voids!

- Voids are areas that have not been filled in or crushed by the falling debris. They are an area of refuge for an individual who has survived the initial collapse.
- There are a number of different types of voids. They all have one thing in common; they are very dangerous and unstable.
- NYC CERT members should not enter voids because they are considered a life-threatening environment. If you hear someone responding from a void, record the location and get as much information from the victim as possible and give this information to the emergency responders.

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Rescue and Removal

- NYC CERT members can practice how to safely remove a victim after finding them during the search phase.
- Proper technique will keep you safe and keep you from injuring yourself while helping others.

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Rescue and Removal: Continued

Primary Functions:

Create a safe rescue environment.

Remove victims.

Triage or stabilize victims.

- A NYC CERT member must perform an incident safety size-up to determine if it is safe for CERT to operate.
- If the scene is determined to be safe for a NYC CERT, the team must operate in a safe manner. Treating and removing the victim can cause more harm to NYC CERT members and those you are helping if not done properly.

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Rescue and Removal: Continued

Depends upon:

General stability of immediate environment
Condition of victim
Strength and ability of rescuers
Number of rescuers

- The actual rescue and removal of a viable victim is dependent on many factors that must be evaluated at the scene of the incident.
- The difficulty of the rescue and removal must also be considered. If the rescuers do not have the proper tools to safely rescue the victim, they are now operating in a manner that is putting the victim and the rescuers in danger. This would be a time to stabilize the victim and alert emergency responders to the situation as soon as they arrive.
- Keep in mind that removing a victim that is unable to walk or climb requires large amounts of manpower. Carrying a victim over unstable terrain is an exhausting operation that may require relief before they are removed to a safe environment.

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Establish Rescue Priorities

Removal priorities:

Surface victims

Victims slightly entangled near the surface

Consider other factors:

Rising water

Fire

- Surface victims that are uninjured will self-evacuate. Those on the surface that have injuries may need assistance to get to safety. Remove these victims first.
- If there are large numbers of surface victims with injuries, additional CERT members can transport them to the casualty collection point (CCP), while members of the search group continue to remove the additional victims from danger.
- People that are partially entangled will require more time to remove from danger. NYC CERT members should attempt to do the greatest good for the largest number of people by accomplishing the easier rescues first before taking on the more time-consuming operations.
- NYC CERT members must maintain situational awareness to recognize other hazards in addition to the original incident. SEE THE BIG PICTURE.

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Conduct the Rescue

Once the plan has been developed, the rescue team puts it into action and begins the rescue.

- Everything leading up to this point was preparing for the rescue and removal of the victim.
- Once the plan is in place it needs to be implemented.
- Each step of the way must be evaluated for personal and team safety. If one method is unsafe, reevaluate and attempt another method.

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Rescue and Removal

Types of victim removal include:

Self-removal or assist,

Lifts and drags, and

Assist victims to extricate themselves when possible.

- There are a wide variety of rescue and removal methods that can be employed. It is most important to use the method that will ensure the most effective and safe operation for the victim and the rescuers.
- Different methods of removal require varying amounts of manpower. Be sure the manpower is available for the method of removal selected and the members have the strength and ability to perform the removal.
- At the scene of a disaster, everyday items (doors, blankets, chairs, etc.) may be used to assist in the removal of victims. Improvise and use your imagination to solve problems.

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Removal Techniques

Lifting methods for lightly trapped victims:

Leveraging

Cribbing

- Use leverage when attempting to lift a heavy object. This will make your task much easier. A long lever and fulcrum (the pivot on which a lever moves) will ease the operation.
- Looking at the above illustration, the fulcrum should be closer to the object you are attempting to lift. The longer the effort side of the lever is, the easier it will be to raise the output side.
- When performing a lifting operation, the entire load must be watched so it does not shift out of balance. Cribbing is another method NYC CERT members can use to ensure a safe operation for rescuers and the victim.
- Cribbing is using smaller pieces of wood to stabilize a load that is being lifted or that could possibly shift while rescuers are operating nearby.

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Pictures of: Removal Tools

Backboard with 3 straps

4x4 cribbing

2x4 cribbing

Cribbing wedges

Pry bar

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Evaluate Your Progress

Continually monitor the situation to prevent and harm to the rescuers and /or patients.

Determine if the plan is working.

If not, how can it be changed to make it work?

- NYC CERT members must evaluate the effectiveness of their operation and adjust their approach if necessary. It is easy to get tunnel vision when involved in an operation and the light search and rescue group leader must evaluate whether the team is working safely and effectively.
- The light search and rescue group leader should not be involved in hands-on activities but must step back, evaluate the group and maintain a supervisory role over team members.
- Supervision, training, and discipline are the keys to safely accomplishing your goals.

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Victim Tracking

Remove victims to a casualty collection point.

Triage.

Separate victims by triage tag.

If victims are removed prior to arrival of first responders CERT should record:

Name of victim,

Name of hospital, and

Nature of injury.

- When victims are removed from danger it is important to gather them in a central area where they can be further triaged and treated for their injuries.
- Injured victims may be a source of detailed information about remaining occupants and the circumstances which led to the collapse.
- Separate the victims into groups based on the color of their triage tags. This will allow emergency medical personnel to treat and transport them more efficiently.
- NYC CERT recorder should gather the total number of victims, the number in each triage category, the victims' names, nature and extent of their injuries and to which hospitals they are being sent. This information should be transferred to first responders.

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Transfer of Command

- The NYC CERT lead will brief the first arriving emergency responders.
- The NYC CERT lead will inform the emergency responders about:
 - What the team found when it arrived.
 - What actions the team has taken prior to the arrival of emergency responders.
 - Where team members are currently operating.
- The documentation of team operations and victim tracking by the team recorder will be the framework for the transfer of command.
- The NYC CERT lead should ask if there is anything further the NYC CERT team can do to assist first responders.
- The NYC CERT lead will inform the team of new assignments or tell the members to withdraw to a designated area.

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Possible CERT Roles Building Collapse

- Assist with community outreach and information dissemination.
- Assist with locating nearest shelter.
- Assist with sheltering and food distribution.
- Work with NYPD retrieve residents' items.
- Work as a liaison between the community and responding agencies.
- Assist with perimeter / traffic management.

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During Hurricane Sandy

Staten Island CERT assisted in missing person searches as requested by ESU in impacted areas.

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Exercise:

Light Search and Rescue

Extricate the victims using the provided materials.

Pay attention to victim's position and comfort – don't re-crush the victims!

- CERT Response Protocols
- ICS Organization
- Possible CERT Roles
- CERT Safety

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LESSONS LEARNED

- Understand the role of CERT teams in a search and rescue incident.
- Know how to complete a damage assessment and set up your team in ICS to deploy and be a resource.
- Know how to properly complete a size-up before acting on a plan.
- Learn and practice basic search and rescue techniques with proper materials.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?

- What message have you learned this week that you might stress during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

The safety considerations you must prepare for during a light search and rescue incident are extremely important. During your disaster simulation, you will also have other types of response you will need to coordinate. Make sure you know the proper and safe light search and rescue techniques and practice them with your fellow classmates.

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UNIT RESOURCES

CERT Search and Rescue Size-up Checklist

Step 1: Gather Facts

<i>Time</i>	Yes	No
-------------	------------	-----------

- | | | |
|--|--------------------------|--------------------------|
| ▪ Does the time of day or week affect search and rescue efforts? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

How?

Type Of Construction

- What type(s) of structure(s) is(are) involved?

- What type(s) of construction is (are) involved?

<i>Occupancy</i>	Yes	No
------------------	------------	-----------

- | | | |
|--------------------------------|--------------------------|--------------------------|
| ▪ Are the structures occupied? | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------|--------------------------|--------------------------|

If yes, how many people are likely to be affected?

- | | | |
|--|--------------------------|--------------------------|
| ▪ Are there special considerations (e.g. children, elderly)? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

If yes, what are the special considerations?

<i>Weather</i>	Yes	No
----------------	------------	-----------

- | | | |
|---|--------------------------|--------------------------|
| ▪ Will weather conditions affect your safety? | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

If yes, how will your safety be affected?

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- | | |
|---|--------------------------|
| <ul style="list-style-type: none"> ▪ Will weather conditions affect the search and rescue situation? <input type="checkbox"/> <p style="margin-left: 20px;">If yes, how will the search and rescue situation be affected?</p> | <input type="checkbox"/> |
|---|--------------------------|

<i>Hazards</i>	Yes	No
----------------	------------	-----------

- | | |
|---|--------------------------|
| <ul style="list-style-type: none"> ▪ Are hazardous materials involved? <input type="checkbox"/> <li style="margin-left: 20px;">If yes, what hazardous materials? | <input type="checkbox"/> |
| <ul style="list-style-type: none"> ▪ Are any other types of hazards likely to be involved? <input type="checkbox"/> <li style="margin-left: 20px;">If yes, what other hazards? | <input type="checkbox"/> |

	Yes	No
--	------------	-----------

Step 2: Assess and Communicate the Damage

- | | |
|--|--------------------------|
| <ul style="list-style-type: none"> ▪ Take a lap around the building. Is the damage beyond the CERT team's capability? <input type="checkbox"/> <li style="margin-left: 20px;">If yes, what special requirements or qualifications are required? | <input type="checkbox"/> |
|--|--------------------------|

- | | |
|--|--------------------------|
| <ul style="list-style-type: none"> ▪ Are normal communication channels functioning? <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|

Step 3: Consider Probabilities

<i>Life-Threatening Hazards</i>	Yes	No
---------------------------------	------------	-----------

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- | | | |
|---|--------------------------|--------------------------|
| <ul style="list-style-type: none"> ▪ Are there potentially life-threatening hazards? <input type="checkbox"/> <p style="margin-left: 40px;">If yes, what are the hazards?</p> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

<i>Additional Damage</i>	Yes	No
--------------------------	------------	-----------

- | | | |
|---|--------------------------|--------------------------|
| <ul style="list-style-type: none"> ▪ Is there great risk or potential for more disaster activity that will impact personal safety? <input type="checkbox"/> <p style="margin-left: 40px;">If yes, what are the known risks?</p> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

Step 4: Assess Your Own Situation	Yes	No
--	------------	-----------

- What resources are available with which you can attempt the search and rescue?

- What equipment is available?

Step 5: Establish Priorities	Yes	No
-------------------------------------	------------	-----------

- | | | |
|---|--------------------------|--------------------------|
| <ul style="list-style-type: none"> ▪ Can a search and rescue be <i>safely</i> attempted by CERT members? <input type="checkbox"/> <p style="margin-left: 40px;">If no, do <i>not</i> attempt a search and rescue.</p> | <input type="checkbox"/> | <input type="checkbox"/> |
| <ul style="list-style-type: none"> ▪ Are there other, more pressing needs at the moment? <input type="checkbox"/> <p style="margin-left: 40px;">If yes, list.</p> | <input type="checkbox"/> | <input type="checkbox"/> |

Step 6: Make Decisions	Yes	No
-------------------------------	------------	-----------

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- Where will deployment of available resources do the most good while maintaining an adequate margin of safety?

Step 7: Develop Plan of Action

Yes

No

- Determine how personnel and other resources should be deployed.

Step 8: Take Action

- Put the plans into effect.

Step 9: Evaluate Progress

- Continually size up the situation to identify changes in the:
 - Scope of the problem.
 - Safety risks.
 - Resource availability.
- Adjust strategies as required.

Search and Rescue Size Up

Step 1: Gather Facts

The facts of the situation must guide your search and rescue efforts.

When gathering facts, you need to consider:

- 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 greater need will be in commercial buildings.

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Some emergency services resources 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.

- The type of structure. The purpose for which the structure was designed may indicate the likely number of victims and their location.
- Construction type. Some types of construction are more susceptible to damage than others.
- Weather. Severe weather will have an effect on victims and rescuers alike and will certainly hamper rescue efforts. Forecasts of severe weather should be considered as a limiting factor on the time period during which search and rescue efforts can occur.
- 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.

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.

CERT Mission by Structural Damage Category

If Structural Damage Is . . .	Then The CERT Mission Is . . .
Light:	To locate, triage, and prioritize removal of victims to designated treatment areas by the medical operation teams.
Moderate:	Tape off the collapse zone and warn others of the danger. Conduct a perimeter survey for victims; interview bystanders; and call out to possible victims inside of the structure. Ensure no CERT member operates inside damaged building or its collapse zone.
Heavy:	To secure the building perimeter and warn others about the danger of entering the building.

Light damage includes:

- Superficial damage.
- Broken windows.
- Fallen or cracked plaster.
- Minor damage to the interior contents.

Moderate damage includes:

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- Visible signs of damage.
- Decorative work damaged or fallen.
- Many visible cracks in plaster.
- Major damage to interior content.

(Note that a moderately damaged building is still attached to the foundation.)

Do not enter a building with moderate damage.

Heavy damage includes:

- Partial or total collapse.
- Tilting.
- Obvious structural instability.
- Heavy smoke or fire.
- Hazardous materials inside.
- Gas leaks.
- Rising or moving water.

(Note that a heavily damaged building is not attached to the foundation.)

Do not enter a building with heavy damage under any circumstances.

Look at a building from all sides by doing a lap around it.

Communicate your findings to the CERT command post or responding agencies.

After, or in conjunction with, the damage assessment, CERT personnel must consider probable amounts of damage based on the type and age of construction. Experienced search and rescue personnel can determine probable damage to a structure based on the event and the types of structures involved.

Step 3: Consider Probabilities

Because the 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 with an eye toward:

- How stable the situation really is. Even within a structure that appears from the outside to have only minimal or moderate damage, nonstructural damage or instability inside the structure can pose real danger to the rescue team. CERT members should think about what they already know about the structure that's been damaged. Are lawn chemicals, paints, or other potentially hazardous materials stored within the structure? How are they stored? Where are they? It won't take CERT members much time to answer these types of questions, but the answers could make a huge difference in how they approach the search.
- What else could go wrong? Based on the information gathered during steps one and two of the size-up, CERT members should take a few moments to play "What if?" to try to identify additional risks that they may face. What if the electricity fails during the search? What if a wall

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that appears stable shifts and collapses? Applying Murphy's Law (what can go wrong will) to the situation could save CERT members' lives.

- What it all means for the search and rescue. Based on the probabilities, CERT members should think about what they can do to reduce the risks associated with the probabilities they have identified. Is a spotter necessary to look for movement that could indicate a possible collapse and warn the rescue team? Is some remedial action required to stabilize nonstructural hazards before beginning the search? CERT search and rescue teams must remember that their own safety is the first priority.

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). Draw on everything you've learned from steps one through three to assess the situation to determine:

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

Assessing resources is extremely important to search and rescue operations.

Search and Rescue Resource Planning Questions

Resource	Planning Questions
Personnel	<ul style="list-style-type: none">▪ Who lives and/or works in the area?▪ During which hours are these people most likely to be available?▪ What skills or hobbies do they have that might be useful in search and rescue operations?▪ What might be the most effective means of mobilizing their efforts?
Equipment	<ul style="list-style-type: none">▪ What equipment is available locally that might be useful for search and rescue?▪ Where is it located?▪ How can it be accessed?▪ On which structures (or types of structures) might it be most effective?
Tools	<ul style="list-style-type: none">▪ What tools are available that might be useful for lifting, moving, or cutting disaster debris?

Step 5: Establish Priorities

After evaluating the situation, the next step is to determine:

- What should be done?

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- In what order?

The safety of CERT members is always the first priority and will dictate some of your other priorities. For example, removing or mitigating known hazards must be completed before teams begin to search. Think through the situation logically to determine how you should approach the operation.

Step 6: Make Decisions

You are at the point in the size-up where you will make decisions about where to deploy your resources to do the most good, while maintaining an adequate margin of safety. Many of your decisions will be based on the priorities established during step five. Those priorities are based on (in order):

1. The safety of CERT members
2. Life safety for victims and others
3. Protection of the environment
4. Protection of property

Step 7: Develop Plan of Action

Step seven is where all of the information you have about the situation comes together. During this step, the team leader will decide specifically how the team will conduct its operation, considering the highest priority tasks first.

Action plans do not need to be written, but, when search and rescue operations are required, the situation is probably complex enough that a written plan of some type should be developed. Even a simple written plan will:

- Help focus the operation on established priorities and decisions.
- Provide documentation to be given to responding agencies when they arrive.
- Provide documentation that can be used, if necessary, after the incident.

Keep a notebook for jotting notes when developing an action plan. These notes should include changes to the plan that are made based on new information that comes in.

Step 8: Take Action and Step 9: Evaluate Progress

The plan developed during step seven is put into action during step eight. Step nine, Evaluate Progress, is the most critical, not only in terms of evaluating whether the plan works, but also from a safety standpoint.

Size-up is ongoing. Information gained during step nine needs to be fed back into the decision-making process for possible revision of priorities and updated action planning.

Safety Considerations

Regardless of the severity of structural damage, rescuer safety must be the primary concern.

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The two most frequent causes of rescuer deaths are:

- Disorientation.
- Secondary collapse.

Follow these guidelines during all search and rescue operations:

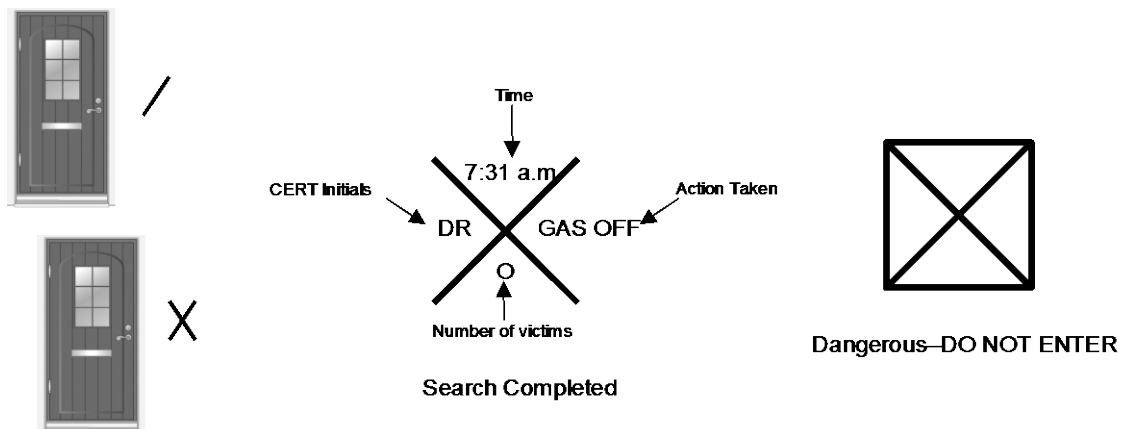
- Use a buddy system. Always work in pairs, with a third person acting as a runner.
- Be alert for hazards (e.g., power lines, natural gas leaks, hazardous materials, sharp objects, etc.).
- You should never attempt to search an area where water is present.
- Use safety equipment. Wearing gloves and a helmet will protect a rescuer's hands and head. Also, the primary cause of rescuer problems after working in a structural collapse is breathing dust, so a dust mask is essential. (However, a dust mask will not filter out harmful materials.)
- Have backup teams available to allow rotating of teams, prevent fatigue, and ensure help if a team gets into trouble. Have teams drink fluids and eat to keep themselves fresh.

Successful search and rescue depends on teamwork.

Conducting Search Operations

An effective search system:

- Indicates rescuer location.
- Prevents duplication of effort.



Marking Searched Areas

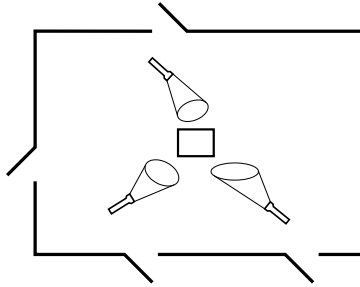
When the decision is made to initiate search operations, CERT members must inspect the area assigned by the CERT area team leader.

The search operation involves two processes:

1. Employing search techniques based on the size-up.

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Triangulation

Triangulation: Three rescuers guided by victim sounds form a triangle around the area and direct flashlights into the areas. The light will help eliminate shadows.

Tip: It is important to move in a circle around the area while directing your flashlights so that there is less of a shadow that the object or area casts.

5. Mark searched areas to document results. Make a single diagonal slash next to the door just before entering a structure. Make an opposite slash (creating an "X") when all occupants have been removed and search and rescue efforts have been completed. The "X" signals to other potential searchers that the area has already been searched. This method:
 - Indicates rescuer location.
 - Prevents duplication of effort.
6. Report results. Keep complete records both of removed victims and of victims who remain trapped or are dead. Report this information to emergency services personnel when they reach the scene.

The decision to attempt a rescue should be based on two factors:

- The risks involved to the rescuer
- The overall goal of doing the greatest good for the greatest number of people

Rescues involve three primary functions:

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

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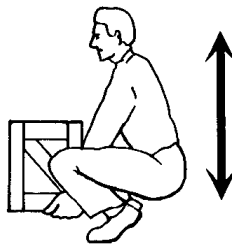
Creating a Safe Environment

There are three goals for all rescue operations:

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

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.

- Know your limitations. Many volunteers have been injured or killed during rescue operations because they did not pay attention to their own physical and mental limitations. CERT rescuers should take the time to eat, drink fluids, rest, and relax so that they can return with a clear mind and improved energy.
- Follow safety procedures. CERT members should always use the proper safety equipment required for the situation and follow established procedures, including:
 - Working in pairs.
 - Never entering an unstable structure.
 - Lifting by bending the knees, keeping the back straight, and pushing up with the legs.
 - Carrying the load close to the body.
 - Lifting and carrying no more than is reasonable.



Proper Body Position for Lifting

Proper Body Position for Lifting showing the back straight and lifting with the knees.

You may encounter situations in which debris needs to be moved to free victims. In these situations, CERT rescuers should consider leveraging and cribbing to move and stabilize the debris until the rescue is complete.

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FOR VISUALLY IMPAIRED USERS

- Leveraging is accomplished by wedging a lever under the object that needs to be moved, with a stationary object underneath it to act as a fulcrum. When the lever is forced down over the fulcrum, the far end of the lever will lift the object.
- A crib is a wooden framework used for support or strengthening. Box cribbing means arranging pairs of wood pieces alternately to form a stable rectangle.

Leveraging and cribbing are used together by alternately lifting the object and placing cribbing materials underneath the lifted edge to stabilize it. Safety is number one: "Lift an inch; crib an inch."

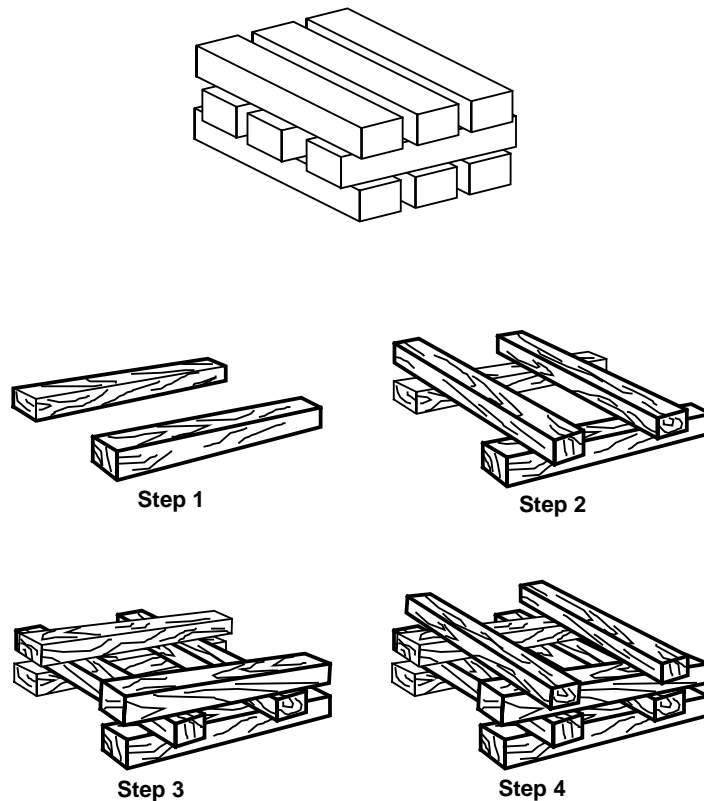
Leveraging and cribbing should be gradual—both for stability and to make the job easier. It may also be necessary to use leveraging and cribbing at more than one location (e.g., front and back) to ensure stability.

When you are able to achieve sufficient lift, remove the victim and reverse the leveraging and cribbing procedure to lower the object.

When you must remove debris to locate victims, you should set up a human chain and pass the debris from one person to the next. Set up the chain in a position that will not interfere with rescue operations. Wear leather gloves to protect your hands.

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Box Cribbing



Four steps for building box cribbing: Step 1: Position two pieces of wood parallel to each other on either side of the collapse. Step 2: Place two pieces of wood perpendicularly across the base pieces. Steps 3 and 4: Add additional layers of wood, with each perpendicular to the previous level.

The type of extrication method selected should depend on the:

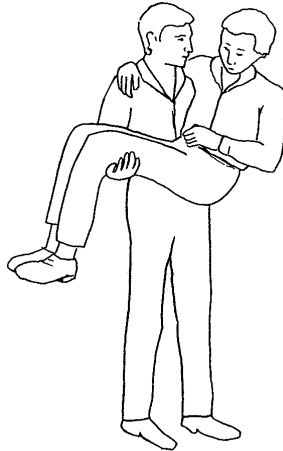
- General stability of the immediate environment.
- Number of rescuers available.
- Strength and ability of the rescuers.
- Condition of the victim.

If safety and time permit, you should not use lifts and drags to remove victims when a closed-head or spinal injury is suspected. In such cases, the spine must be stabilized using a backboard. Doors, tables, and similar materials can be used as improvised backboards. The backboard must be able to carry the person, and proper lifting techniques must be used. When moving victims, rescuers must use teamwork and communication, and keep the victim's spine in a straight line. Remember, rescuer safety and the condition of the building will dictate the approach.

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There are several types of lifts and carries. For example, if the rescuer is physically able and the victim is small, he or she may use the one-person arm carry to lift and carry the victim by:

- Reaching around the victim's back and under the knees.
- Lifting the victim while keeping your back straight and lifting with the legs.



One-Person Arm Carry

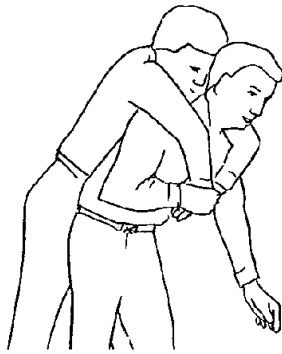
One-Person Arm Carry, which shows the rescuer holding the victim around the victim's back and under the knees.

Note: Consider the size of the victim and the distance he or she needs to be carried before using this carry.

Another way for a single rescuer to lift a victim safely is by using the one-person pack-strap carry. Using this method, the rescuer should follow the steps outlined below:

- Step 1: Stand with his or her back to the victim.
- Step 2: Place the victim's arms over the rescuer's shoulders and grab the hands in front of the rescuer's chest.
- Step 3: Hoist the victim by bending forward slightly, until his or her feet just clear the floor.

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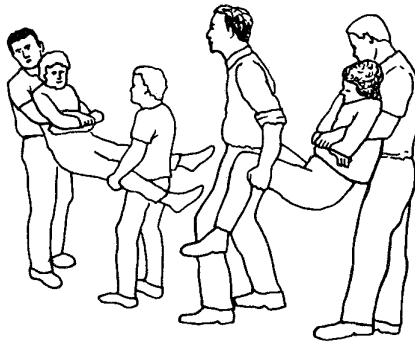


One-Person Pack-Strap Carry

One-Person Pack-Strap Carry in which the rescuer places the victim's arms over his or her shoulder and grabs the victim's hands over his or her chest, then hoists the victim by bending over slightly.

Victim removal is easier when multiple rescuers are available. With two rescuers, a victim may be removed using a two-person lift.

- Rescuer 1: Squat at the victim's head and grasp the victim from behind around the midsection. Reach under the arms and grasp the victim's forearms.
- Rescuer 2: Squat between the victim's knees, facing either toward or away from the victim. Grasp the outside of the victim's legs at the knees.
- Both rescuers: Rise to a standing position, keeping backs straight and lifting with the legs. Walk the victim to safety.



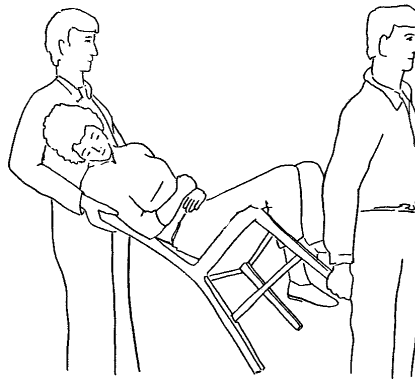
Two-Person Carry

Two-Person Carry in which rescuer 1 squats at the victim's head and grasps the victim from behind at the midsection. Rescuer 2 squats between the victim's knees, grasping the outside of the knees. Both rescuers rise to a standing position.

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Two rescuers can also remove a victim by seating him or her on a chair:

- Rescuer 1: Facing the back of the chair, grasp the back uprights.
- Rescuer 2: Facing away from the victim, reach back and grasp the two front legs of the chair.
- Both rescuers: Tilt the chair back, lift, and walk out.



Chair Carry

Chair Carry in which the victim is placed in a chair and tilted backward as rescuers lift the victim. This carry requires two rescuers.

You can use the blanket carry for victims who cannot be removed by other means. The blanket carry requires at least six rescuers to ensure stability for the victim, and one rescuer must be designated the lead person:

- Step 1: Lay a blanket next to the victim.
- Step 2: Tuck the blanket under the victim, and roll the victim into the center of the blanket.
- Step 3: With three rescuers squatting on each side and grasping a “handle,” the lead person checks the team for even weight distribution and correct lifting position. *Make sure to lift the victim head first to avoid injury to the head.
- Step 4: The lead person calls out, “Ready to lift on the count of three: One, two, three, *lift.*”
- Step 5: The team lifts and stands in unison— keeping the victim level—and carries the victim feet first.

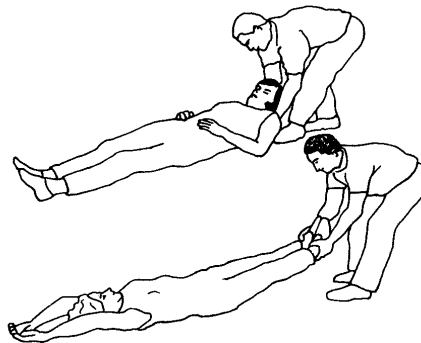
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The team must also lower the victim together, using the following steps:

- Step 1: The lead person calls out, “Ready to lower on the count of three: One, two, three, *lower.*”
- Step 2: The team lowers the victim in unison, exercising caution to keep the victim level.

A variety of materials—such as blankets—can be used as improvised stretchers.

Rescuers can also drag a victim out of a confined area by grasping either under the arms or by the feet and pulling across the floor. However, unless there is no other way to remove the victim and the victim’s removal is time critical, you should not use this drag when debris may cause additional injury.



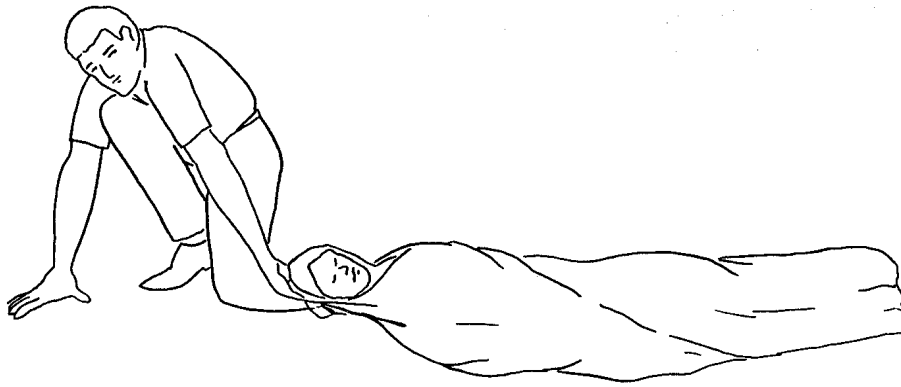
Correct Drag Techniques

Correct Drag Technique, showing the rescuer grasping the victim by either the feet or shoulders and dragging him or her clear of the hazard.

When necessary, one rescuer can use the blanket drag by following these steps:

- Step 1: Wrap the victim in a blanket.
- Step 2: Squat down and grasp an edge of the blanket.
- Step 3: Drag the victim across the floor.

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FOR VISUALLY IMPAIRED USERS

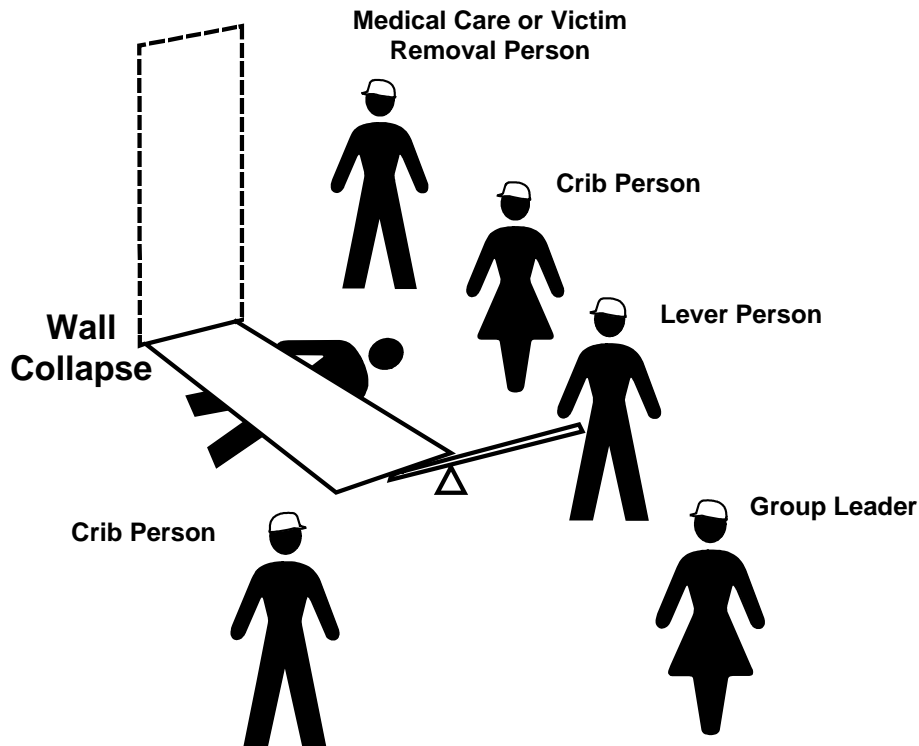


Blanket Drag

Blanket Drag, showing the victim wrapped in a blanket with the rescuer squatting at the victim's head. The rescuer grasps the blanket behind the victim's head and drags him or her clear of the hazard.

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FOR VISUALLY IMPAIRED USERS

Arrangement for Leveraging/Cribbing Operation



Team Organization for Leveraging/Cribbing Operation, showing the victim underneath a collapsed wall and the CERT members at the following locations:

- **Group Leader:** In front of collapse, positioned so that he or she can view the entire operation while remaining out of the rescuers' way.
- **Lever Person:** At the front edge of the collapsed wall and positioned so that he or she can position a fulcrum and lever under the wall.
- **Crib Persons:** On either side of the collapsed wall and positioned to enable the placement of cribbing as the wall is raised with the lever.
- **Medical Care/Victim Removal Person:** Next to the Crib Person who is closest to the victim's head.

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FOR VISUALLY IMPAIRED USERS

Leveraging/Cribbing Operation

1. Conduct a size-up of the scene: Gather facts, identify hazards, and establish priorities.
2. Have one person in charge and formulate a plan of action based upon the information you have received. Identify how and where to lift and crib.
3. Gather necessary materials for lifting/cribbing operations:
 - Lever
 - Fulcrum
 - Cribbing blocks
 - Spacers/wedges
4. Use cribbing materials to stabilize the object prior to lifting. (Set the foundation of the box crib.)
5. Distribute crib materials as necessary to be readily accessible during the lifting operation.
6. Prepare to lift the object: Assemble the lever and fulcrum at the previously identified location.
7. Have someone available to handle the victim.
8. Initiate the lift, using the lever and fulcrum for mechanical advantage.
9. As the object is lifted, add cribbing as needed; build on the foundation of the box crib.
10. When the object is adequately supported, remove the lever and fulcrum. The victim may then be removed.
11. Reinitiate the lift and begin removing cribbing materials, reversing the process by which the crib was built.
12. Progressively lower the object to the ground.
13. Reassemble the lifting/cribbing supplies to be available for additional operations.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL FOR VISUALLY IMPAIRED USERS

UNIT 9: POLICE SCIENCE AND TERRORISM

UNIT INTRODUCTION

This module will focus on basic police science skills for CERT deployments. Traffic management will be an important role CERT members will play. It can also be the most dangerous. You will learn proper traffic management techniques to keep you, your team members, and pedestrians safe. Terrorism is a man-made disaster that New Yorkers know all too well. Your level of awareness to terrorist targets and plans will make you notice things a little more closely on a daily basis.

UNIT OBJECTIVES

- Understand the role of CERT in traffic management situations and keeping a safe perimeter.
- Practice safe traffic management techniques with a partner.
- Raise awareness to terrorist thinking and how you can be more cognizant of what is going on around you and what you can do when something just doesn't seem right.
- Understand a CERT team's role and CERT in action.

UNIT REVIEW

Everything you have learned so far may be affected by a terrorist attack. Use this knowledge and your strength of being a New Yorker to be aware and keep yourself and city safe.

LOOKING FORWARD

Fasten your seatbelts! Next week everything you have learned in the last nine weeks comes together for your disaster simulation. You and your fellow team members will need to review ICS and all the different units to make your experience as successful as possible.

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Police Science: Traffic Management

- Traffic management is an approved role for CERT.
- By providing traffic management CERT supports the NYPD and NYPD Auxiliary units.
- Traffic management is one of the most dangerous CERT roles, so learning proper techniques and practicing is vital.

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FOR VISUALLY IMPAIRED USERS

Introduction

This lesson has been created to teach CERT members how to effectively direct and manage traffic during an emergency.

Your primary goal is personal and team safety!

- Safety is your number one priority!
- Being alert at all times and paying attention will keep you and your teammates safe from harm.
- Practice, practice, practice. You can practice as a team both indoors and out!

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FOR VISUALLY IMPAIRED USERS

Traffic Management is serious business and at times has proven to be deadly.

More police officers are injured in traffic-related accidents than any other category. For 13 years in a row, more officers died in traffic accidents than in shootings or any other cause of deaths. (National Law Enforcement Officers Memorial Fund, June 2011)

- In the US, 73 officers died in the line of duty in 2010, up from 51 in 2009.
- The number of officers killed in traffic-related incidents decreased 17 percent during the first half of 2011, from 42 to 35. Traffic-related incidents (automobile, motorcycle crashes, and instances in which officers are struck while outside their police vehicles) remain the leading cause of death among law enforcement officers in the United States, a trend that began in 1998.

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FOR VISUALLY IMPAIRED USERS

Objectives

Identify traffic intersection and construction hazards on your post.

Understand basic principles of how to safely control an intersection.

Understand how to properly address inquiries from the public.

Understand how to handle emergency vehicles approaching your intersection.

- The objectives for this unit teach you the basics of traffic management and the basic equipment you need.
- You will also learn how to handle specific scenarios involving motorist and pedestrian inquiries and how to expedite emergency vehicle traffic safely.

BASIC NYC CERT MEMBER TRAINING PARTICIPANT MANUAL
FOR VISUALLY IMPAIRED USERS

Traffic Hazards

Open or raised manhole covers
Steel construction plates
Oil or antifreeze on pavement
Construction debris
Potholes
Pedestrians (tourists)
Electrified manhole covers
Construction sites (warn others to look up!)
Motorists

- You must be aware of everything around you prior to starting to direct traffic.
- Use your senses- look and listen to see if there are things that may affect your response.
- Take note of potential hazards, notice traffic patterns, etc.

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FOR VISUALLY IMPAIRED USERS

Familiarize yourself with the intersection.

Study the signal sequence.

Study the traffic characteristics from the side of the intersection.

Use any available resources.

Are traffic cones available?

Is there any caution tape available?

- Check to see if the traffic lights at the intersections are working.
- Notice the amount of time it takes for the light to change.
- Use the lights to your advantage while directing traffic.
- Before you begin, check to see if there is anything in the area or team resources that might assist you (traffic cones, etc.).

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FOR VISUALLY IMPAIRED USERS

Strategies

Work in teams of two.

Be visible in your intersection.

Make sure the motorist and pedestrians know that you are there.

Ensure eye contact with motorists.

- ALWAYS WORK IN PAIRS. ALWAYS HAVE A PARTNER. NEVER MANAGE TRAFFIC ALONE!
- Wear your NYC CERT reflective vest and other mandatory uniform.
- Always look at the drivers and pedestrians in the eye while you are directing them. Looking away is dangerous for you and others in traffic.
- NEVER step backwards while directing traffic. Your partner should also be keeping an eye out for you.

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FOR VISUALLY IMPAIRED USERS

Equipment

Proper Equipment:

CERT traffic vest

Whistle

Flashlight

White gloves (if available)

Dress for the weather!

- Wear noticeable CERT gear for all types of weather or scenarios.
- White gloves allow motorists and pedestrians to see the movement and direction of your hands and the direction in which they need to go.
- If the weather is bad, make sure your reflective vest is on top of a coat or raincoat.

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FOR VISUALLY IMPAIRED USERS

When attempting to stop traffic you must first point at vehicle in the lane you are going to stop.

- Make sure your movements are exaggerated so motorists and pedestrians can see you.
- Your hand and arm movements need to be seen through windshields and from all different heights.
- You may think you look silly, but it will keep you safe!

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FOR VISUALLY IMPAIRED USERS

When stopping traffic be sure that your hand reaches above your head to ensure visibility.

- Use your hands to point, your whistle to get attention, and your arms to gesture a direction.
- Always make sure the lane of traffic can see you and your partner before it begins to move.

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Start Traffic

Point with your arm and index finger towards the vehicle you want to start.

Once you get the attention of the driver, swing your hand over your head with your palm up.
After traffic has been started from one side, drop that arm and start traffic from the other side in the
same way.

- Keep using exaggerated movements to make sure all directives can be seen clearly.
- Use a whistle to accentuate the movements.
- Start traffic moving slowly, in case you need to quickly stop it again.

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FOR VISUALLY IMPAIRED USERS

Whistle Signaling

One long whistle blast to stop vehicle & pedestrian traffic.

Two short blasts to signal traffic to proceed.

- When using a whistle and blasting commands, you must also use your hands and arms so the motorists and pedestrians know what to do and what direction to go.
- You must use your diaphragm to get enough air to blow the whistle. If you don't, you may become winded or dizzy and be unable to continue.

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FOR VISUALLY IMPAIRED USERS

Keep all turning vehicles in front of you at all times, especially:

Buses, trucks, tractor trailer combos*
Articulated buses, double trailer trucks

- All turning traffic must always be kept in front of you and your partner so you can see traffic and the traffic can see you.
- Large and extra large vehicles (trucks, SUVs, etc.) must be able to see you from their higher driver's seat.
- Articulating buses and tractor trailer combinations have extra lengths to consider when turning. Both will be discussed in more detail during this unit.

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FOR VISUALLY IMPAIRED USERS

DO NOT STAND DIRECTLY IN FRONT OF THE VEHICLE!

Picture of: A CERT member executing traffic direction wrong

- Standing directly in front of a vehicle may get you injured.
- Before directing traffic, scout which position will give you the safest visibility.
- Directing traffic may seem like an easy thing to do, but there are a lot of things to think about before you and your team members go into the streets.

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FOR VISUALLY IMPAIRED USERS

Always be alert while you are in the intersection and don't use your cell phone.

Watch for:

Protruding objects on trucks & buses

Mirrors

Overhanging cargo

Open side or rear doors

Flapping canvas

Loose chains or rope

Damaged vehicle bumpers

*Also note the turning pattern of the articulated buses.

*Team members must communicate with one another.

- Always be alert.
- Do not talk to your partner about anything other than your traffic controlling job.
- While directing traffic, do not use a radio or phone to talk to other team members. Rely on your partner or another team member to communicate.
- Your team may use runners to get information from one intersection to another.
- NEVER use your cell phone to talk or text while you are directing traffic.

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FOR VISUALLY IMPAIRED USERS

Picture of: A secured load with loose chains

- Be aware of trucks and the materials they are hauling.
- Items may fall off and injure you, your partner, other motorists, and pedestrians.

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FOR VISUALLY IMPAIRED USERS

Picture of: A Articulated Bus

- *Articulating buses, also known as tandem buses, bendy buses, or accordion buses, are a type of bus with an increased passenger capacity. Found almost exclusively in public transportation use, these buses are approximately 18 m (60 ft), while regular buses are 11 to 14 m (35-45 ft). To make them nimble enough to safely navigate streets at their increased length, they are fitted with an extra axle (set of wheels) and a joint usually located slightly behind the midpoint of the bus, behind the second axle.
- These buses need extra room to turn due to their extra length.
- Do not turn your back or look away from any bus. You may not be able to see the second half of the bus until it is too late to move out of the way.
- Be aware that other vehicles may try to pass an articulating bus to speed ahead.

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FOR VISUALLY IMPAIRED USERS

Be extremely cautious of turns involving tractor-trailer units.

The tractor will turn and the trailer (box) will pivot.

Watch the center of the trailer.

Tractor-trailer units require two lanes to turn.

- You will need to take extra precautions with tractor trailers, especially if they need to turn a corner.
- You may need to have a third or fourth person to assist you to shut down the other lane of traffic.

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FOR VISUALLY IMPAIRED USERS

Moving Emergency Vehicles through Intersections

Also known as “pulling” traffic:

Extreme caution must be used.

Pedestrian safety is your top priority, however emergency vehicles should be expedited when possible.

- Emergency vehicles should be using lights and sirens, but some may not use them, or you may not hear them due to other traffic noise or weather.
- Even if they are not using lights or sirens, they may still be going at faster speeds.
- Some emergency vehicles may not stop or slow down for you. Do not attempt to stop them.

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Emergency Vehicles

When you see or hear an emergency vehicle coming do NOT assume that the vehicle is going to see you.

- Keep yourself, your partner, and other motorists and pedestrians safe if you hear or see an emergency vehicle coming towards you or through your traffic pattern.
- Motion other traffic and pedestrians to stop.
- Step out of the way if they do not slow down or stop.

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FOR VISUALLY IMPAIRED USERS

Addressing Inquiries from the Public

A motorist seeking information or directions should be moved out of the intersection.

If the desired information is extremely brief, you may deliver it in the intersection.

Get the motorist or pedestrian out of the intersection as quickly as possible.

Do not confront a road-raged motorist.

Call police for assistance via 911.

- Most people will want information and will calm down once they know what is going on.
- Your job is not to calm motorists down. It is to get them through the area in the safest manner possible.
- If someone becomes angry, or you feel threatened, call 911 for help.

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FOR VISUALLY IMPAIRED USERS

Transfer of Command

You must communicate to arriving emergency units:

Locations of closures (document them)

The number of closures

Direction of traffic flow at the closure

Traffic personnel must communicate with each other.

- Transfer of command will also take place if someone else from your team or another CERT team comes to relieve you.
- You may be asked to brief your CERT lead. This may be a team chief from another CERT team.
- Only give information that is vital. The transfer of information should be completed in a quick and efficient manner.
- Do not transfer command where you are posted to direct traffic. Transfer it in a safe area, out of the way.

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REVIEW

Never step backwards without looking.

Be courteous but brief when providing information to motorists.

Expedite emergency vehicles when possible; pedestrian safety is very important.

Keep loose articles of clothing secure.

- If you are unsure of your abilities, practice with your team members during a meeting, or with your precinct's community affairs officers.
- Traffic management can be practiced indoors or out.
- Signaling can be practiced at anytime.
- OEM and the NYPD also offer post-training traffic management classes in the five boroughs.

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FOR VISUALLY IMPAIRED USERS

SUMMARY

Emphasis is on personal and team safety!

Work in teams of two.

Wear CERT traffic vest.

Know your intersection.

Remain alert at all times.

- Personal and team safety must not be overlooked. This is your number one priority.
- Review your objectives.
- Make sure all of your equipment is in your response bag and ready to go.

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Questions?

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Terrorism Awareness

- Terrorism is a real threat found daily around the world.
- The acts of September 11, 2001 changed the way New York City, the United States, and the world views and responds to threats and acts of terrorism.

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FOR VISUALLY IMPAIRED USERS

Objectives

Define terrorism.
Identify potential targets in your community.
Recognize indicators of terrorist activity.
Prepare for terrorism.
Observe and record.
Perform disaster preparedness.

- The objectives for this unit are for educational purposes and personal awareness.
- By knowing how terrorism may present itself in NYC, you can be prepared both as a New York City resident and as a member of NYC CERT.

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Terrorism Definition

The unlawful use of force or violence committed by a group or individual against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.

-U.S. Department of Justice

- While there are many definitions of terrorism, the above, from the U.S. Department of Justice, concentrates on the legal aspect of committing the act of terrorism.

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Terrorists & Organizations

Pictures of: Individual Modern Terrorists

- Terrorists and terrorist organizations can be of any race or religion. They can be of any socio-economic class or from any country. There is no one type of person to look for when looking for a terrorist.
- Osama Bin Laden, leader of Al-Queda, World Trade Center and Pentagon attacks, 2001
- Timothy McVeigh, Oklahoma City Bombing, 1995
- Shoko Asahara, founder of Aum Shinrikyo, Sarin attack in Japanese subway, 1995
- Lucas John Helder, 21 year old college student, pipe bomb spree covering 5 mid-western states, 2002.
- Umar Farouk Abdulmutallab, 23 year old, attempted to detonate plastic explosives hidden in his underwear while on board a Northwest airplane.
- Faisal Shahzad is a Pakistani American who attempted the May 1, 2010, Time Square car bombing.

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Characteristics of Terrorists Operations

Attacks are often well-planned out.

Use the smallest organizational element possible.

Follow strict security measures.

Targets areas that are undefended or have a weak security profile.

Tend to employ secondary and / or multiple attacks.

- Terrorist operations are usually planned years in advance.
- The smallest organizational element may be one or two persons used to carry out an attack, not a large group.
- The smallest organizational element and strict security measures make it difficult to detect an impending attack.
- Security measures are often tested prior to the attack to expose the target's weaknesses.
- Secondary attacks usually occur about 20 minutes after the initial attack and are often placed in the path of the first responders.

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FOR VISUALLY IMPAIRED USERS

Terrorist Goals

Cause mass casualties.
Cause loss of critical resources.
Disrupt vital services.
Disrupt economy.
Cause individual and mass panic and fear.

- The goal of most terrorist is to expose the vulnerability of the target.
- This can be done in a variety of ways such as:
 - Mass casualties;
 - Loss of critical resources; and
 - Economic disruption.
- The September 11, 2001 attack on the World Trade Center and the Pentagon accomplished all three listed above and changed the way we live forever.

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FOR VISUALLY IMPAIRED USERS

Identifying Potential Targets

Which target is more vulnerable than the other?

Shopping Mall, City Hall or Parade

- A hard target is a building, piece of critical infrastructure (i.e. dam, power plant, utility company, etc.) or other commercial or non-commercial entity that has rigid security measures in place, including barriers, cameras, guards, etc.; ex. The Statue of Liberty or Grand Central Station.
- A soft target is less visible and will have less security measures; ex. shopping malls.
- A shopping center is the most vulnerable place listed for the following reasons:
 - Inferior security (smaller staff with limited training);
 - No restrictions for entry; and
 - Multiple access points.

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FOR VISUALLY IMPAIRED USERS

Past Terrorist Targets

Oklahoma City (1996)
World Trade Center (1993 / 2001)
Pentagon (2001)
Northwest Flight 253 (2009)
Times Square (2010)
Boston Marathon (2013)

- All these six attacks occurred within the United States.
- Two attacks occurred at the World Trade Center eight years apart. This shows the patience and careful planning of the terrorists.
- Many attacks were carried out by American-born citizens such as Timothy McVeigh (Oklahoma City), Eric Robert Rudolph (1996 Olympic Park Bomber) and Dr. Bruce Ivins, (anthrax attacks).
- What did each of these targets stand for to Americans?
- Were the terrorists successful in carrying out their goals?
- What were the short-and-long term effects of these attacks on the United States?

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Indicators of Terrorism

- We will discuss CERT roles at a possible terrorist incident.
- What are things to look for in regards to terrorism or a terrorist attack?
- What might your role be in a terrorist attack?

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Terrorist Weapons

Biological

Nuclear

Incendiary

Chemical

Explosive

- Use the acronym B-NICE to remember the five types of weapons.
- Biological weapons usually will not have an immediate effect on victims and may not be detected until after the release.
- Nuclear weapons are difficult to attain and an unlikely method of attack.
- Incendiary weapons are an inexpensive method to instill panic and fear. One example is a Molotov cocktail.
- Chemical weapons have an immediate effect on victims and will produce similar symptoms on all victims.
- Explosives are the most common choice of terrorist weapon. They are an inexpensive method of doing extensive damage to both victims and structure.

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Improvised Explosive Device

- Improvised explosive devices (IEDs) are one type of terrorist weapon.
- IEDs are often seen as a choice of terrorist attack.
- We will also discuss possible limited CERT actions at a potential improvised explosive device incident.

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Improvised Explosive Device (IED)

If an IED is located:

DO NOT touch or examine the device.

Evacuate, isolate, and contain the area.

DO NOT use a cellular phone or portable radio.

Remove all people from the area and go behind hard cover.

Watch out for secondary hazards, such as parked cars.

- Never touch a potential IED. It may be designed to detonate when it is lifted or moved.
- IEDs can also be detonated by a timed device such as a clock or cell phone. They can also be detonated using a remote control such as a garage door opener which may allow the terrorist to target first and second responders.
- Cellular phones and portable radios should not be used by people within 500 feet of a suspected device.
- Due to the high potential of the presence of a secondary device, all people should be evacuated from the area immediately.

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Potential IED Hiding Places

- Just about anything and anyplace can be used as a potential hiding place for an IED.
- NYC CERT members should consider the possibility of IEDs being placed in:
 - Mail packages, letters, or mailboxes;
 - Desks or storage containers of any kind;
 - Utility closets or boiler rooms;
 - A ceiling with removable panels;
 - Any area that is hidden by drapes or curtains;
 - Restrooms and public hallways; and
 - Trash receptacles.
- Familiarization with some of the more common hiding locations will help NYC CERT members to be more aware and alert in preparing for the initial attack, as well as being alert to the possibility of a secondary device and where it may be concealed.

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Never Approach a Suspicious Package

- NYC CERT trained members should never attempt to approach or investigate a report of a suspicious package.
- A NYC CERT member should consider:
 - Call 911 and start the emergency response system.
 - Limit access to the area.
 - Attempt to evacuate the area.
 - Update OEM or 911 as to changing conditions, if any.

Vehicle-Borne Improvised Explosive Device

- The bombing in Manchester, England demonstrates the amount of devastation and damage a vehicle IED can deliver. There was warning of the impending detonation; therefore the area was evacuated prior to the explosion.
- In Oklahoma City on April 19, 1995, home-grown terrorist Timothy McVeigh drove a massive homemade bomb concealed in a rental truck. He parked the car outside the targeted building and walked to another car and drove away. The bomb exploded at approximately 9:00 AM heavily damaging the Alfred P. Murrah Federal Building. A total of 168 people were killed, including 19 children, and more than 500 were injured. The bombing remained the deadliest terrorist assault on U.S. soil until the attacks on the World Trade Center in New York City and the Pentagon outside Washington, D.C., in 2001.
- A vehicle can be used to easily deliver large quantities of powerful explosives to targets with precision and relatively low costs when you consider the damage that can be inflicted.
- There is also no sophisticated knowledge or training that is required to deliver this type of IED, and it can be detonated remotely.
- Vehicle explosions offer high visibility and drama.

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Secondary Devices

- NYC CERT members should always consider the possibility of a secondary device.
- Terrorists may use secondary explosive devices to kill and injure emergency personnel that are responding to an initial attack.
- An example of a secondary device was the bombing of the Sandy Springs Abortion Clinic in Georgia in 1997. First responders arrived on the scene of an obvious explosion. They were on the scene for about an hour when a second blast occurred destroying the fire chief's vehicle and injuring six additional victims, including a firefighter, an FBI agent, an ATF agent, and bystanders who were too close to the scene.
- Secondary devices most often detonate approximately 20 minutes after the initial explosion. These devices can be concealed almost anywhere, including on victims. It is likely that these devices will be placed along the route of first responders.
- NYC CERT members should be aware of the importance of distance and shielding. NYC CERT members will work under the direction of first responders and never take action on their own.

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Preparing for Terrorism

- The role of NYC CERT and your role as a citizen of the United States are to be vigilant in preparing for terrorism.
- As is always the case, preparedness is the first step to surviving a disaster and proper planning will allow NYC CERT to offer the greatest amount of assistance to the greatest number of people during a disaster.
- Preparing loved ones, neighbors, and others in your community about terrorism awareness will also increase the role of NYC CERT.

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CERT Guiding Principles

Team safety is the number one priority!

Always do a thorough size-up:

What are the dangers?

What are the team capabilities?

What are the team limitations?

- The most important principle for each and every NYC CERT member to understand is safety is always our top priority and ensuring team safety is everyone's responsibility.
- As evidenced by the events on September 11, 2001, the recovery from a major terrorist event may take weeks, months, or more.
- In a long term recovery operation, the scene may be determined safe enough for CERT members to operate under the direction of OEM.
- CERT will only be tasked with responsibilities which are within the scope of your training.

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If You See (or Hear) Something, Say Something

911 – for EMERGENCIES

311 – for Non-Emergencies or general information

1-888-NYC-SAFE – Counter Terrorism Hotline

Suspected terrorist activity

24-hours a day

All calls are confidential.

- New York City and the MTA have a security awareness campaign known as “See Something, Say Something”.
- This campaign is meant to reinforce the efforts of the MTA and police to keep New Yorkers safe. The goal is for all citizens to join the police and the MTA as the eyes and ears of the transportation system. Commuters are asked to:
 - Be alert to unattended packages.
 - Be wary of suspicious behavior.
 - Take notice of people in bulky or inappropriate clothing.
 - Report exposed wiring or other irregularities.
 - Report anyone tampering with surveillance cameras or entering unauthorized areas.
- After the train bombings in Madrid, officials stated that several passengers interviewed remembered seeing the unattended knapsacks that turned out to contain the bombs, but they did not alert anyone.
- NYC CERT members should be suspicious of anything that is left unattended whether they are using mass transit or in any aspect of your daily activities. With this heightened level of awareness and an understanding of how to report this suspicious activity, NYC CERT members will be working to combat terrorism in our city.

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CERT Role at a Terrorist Incident

Do not touch it!

Move away from the object or area.

Keep onlookers away from the device.

Caution! Using cellular phones or two-way radios may detonate an explosive device!

- As we discussed, the role of NYC CERT members at a terrorist event will most likely be limited. This is not a traditional CERT response, and members should be aware that a terrorist incident or a suspected terrorist incident is a STOP sign for NYC CERT members to respond.
- It will be the responsibility of OEM and other first responders to secure the scene and determine whether or not CERT may be deployed, as it is for any CERT deployment.
- If a terrorist incident is suspected, CERT members should attempt to take in the entire area during their size-up and move as quickly as possible to a safe location.
- NYC CERT members should remember:
 - Do not touch any suspected device or package.
 - Move away from the object or area.
 - Keep onlookers away.
 - Report findings to authorities immediately.

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Observation and Recording

DO NOT become personally involved.

Examine the entire situation before taking action.

Be cautious of secondary devices.

Look for signs of a release or exposure.

Obtain or verify information from victims.

Record as many details as possible:

Number of victims

Symptoms

Devices used for release

- Observe what is happening before your eyes and believe that it is real. Take a look at the big picture before you react. Keep in mind that terrorists will deploy secondary and tertiary devices to inflict further damage to those that respond to aid the initial victims.
- Observe the area for signs of release or exposure to chemicals. Gather as much information as possible from victims. Try to verify from victims what happened or what they witnessed by asking them basic questions.
- Document as much information as you can concerning victims and the signs and symptoms they are displaying. Try to determine the type of device used in the attack so emergency responders can operate accordingly.

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Self-Care During Terrorist Incidents

At the incident:

Limit exposure time.

Increase the distance from the hazard.

Stay upwind.

Add shielding.

- Since it is very difficult to immediately determine what the overall threat is at a terrorist incident, the best formula for safety is time – distance – shielding. Each element of this formula will protect you, but all three are required for complete protection.
- Time:
 - Limit the time you are exposed to the contaminated area. This will minimize your exposure to whatever threat the terrorist deployed in the attack.
- Distance:
 - Move yourself to an area that minimizes or removes the threat of injury or death. In case of explosions, many victims are killed because of the blast effect. The energy of the explosion is enough to kill people if they are too close to the source.
- Shielding :
 - Get to an area of cover such as behind a substantial wall or building. You often hear experts say “if you can see the bomb, the bomb can see you”. That means that you could be seriously injured or killed if you don’t provide cover for yourself.

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What to Do if Exposed

Leave the contaminated area immediately.

Report to a casualty collection point:

Once contaminated you are now a victim.

Report for decontamination:

Clothing removal?

Showers?

Medical examination?

CERT members and victims should remain on scene until they are evaluated and released by trained personnel.

- If you have been exposed to some type of contaminant at an incident, you need to remove yourself from the immediate area as quickly as possible. You need to protect yourself by getting to a casualty collection point or let EMS know that you feel you have been contaminated and need treatment.
- Before getting treatment from EMS, you must be decontaminated so you do not cross contaminate others that are assisting other victims. Decontamination may simply consist of removing your outer layer of clothing or be as complex as showering and scrubbing the substance from your skin.
- Once you have been decontaminated, you will be medically examined for signs and symptoms of exposure. EMS will monitor your condition, provide medication if necessary, and counsel you on the effects of the exposure.
- NYC CERT members and all exposed victims should remain on scene until they are evaluated by EMS. Many times a simple decontamination of removing the outer layer of clothing will remove up to 90% of the exposure. You do not want to cross contaminate everyone you come in contact with as you travel and bring the contaminants into your home. Get evaluated.

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Transfer of Command

Location of explosion

Number of victims

Buildings affected by the explosion

Location of street closures

Indicators of criminal activity

Location of victims and witnesses

- When first responders arrive, identify yourself as a NYC CERT member and provide the information you have gathered to the emergency responders.
- Provide the facts you know; do not speculate. Inform the emergency responders what you witnessed and information other witnesses provided.
- Inform the emergency responders if you took any actions to close streets or set up a casualty collection point and what those locations are.
- Ask the emergency responders if you can be of any further assistance. They may give you an assignment or have you standby for further orders.

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Incident Command Post

Location where primary command functions are performed

Only one per incident

Normally not relocated once established

- The Incident Command Post is identified by the symbol above.
- CERT lead should always remain at the Command Post
- The CERT lead may be reassigned as first responders arrive on scene.
- NYC CERT teams should be guided by the OEM citywide incident coordinator (CIC) on scene.
- A single command post provides a coordination of resources from one location and limits duplication of services by coordinating with other agencies

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Staging Areas

Temporary locations to place available resources.

Staging Area Manager reports to Incident Commander.

Resources in staging area are available and ready to work.

- The CERT staging areas will be managed by the NYC CERT staging area manager.
- It should be located at a remote location away from the incident so resources are not depleted prior to use.
- The staging area manager reports directly to CERT lead until the operations section lead is established.
- CERT lead should consider initially staging personnel for relief and monitor changing conditions.
- Once a staging area is established NYC CERT members should report to the staging area manager, not the command post.

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Questions?

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LESSONS LEARNED

- Understand the role of CERT in traffic control situations and keeping a safe perimeter.
- Practice safe traffic control techniques with a partner.
- Raise awareness of the terrorist mindset and how you can be more cognizant of what is going on around you and what you can do when something just doesn't seem right.

COMMUNITY AWARENESS

- What lessons were learned in this unit that you might bring to your community?
- What is a message you might stress, learned this week, during a Ready NY presentation?

PREPARING FOR YOUR FINAL WEEK

This is your last unit before the disaster simulation. The ideas and awareness you received during the terrorism part of this unit may come into play during your exercise. Practice your traffic safety and know the techniques of how to properly and safely block off traffic and deal with angry drivers.

EVALUATION

Please fill out the evaluation for Unit 9 in the back of the binder. When completed, please hand in to your OEM Liaison.

UNIT RESOURCES

NYC CERTs are not equipped or trained to respond to terrorist incidents. It is not in a response role where you and your team members will play an important part in keeping your community safe from terrorists. By preparing your family and neighbors, CERT can do the most good.

There are ways to prepare for a terrorist incident. Some of the steps for preparing for a terrorist incident are the same as for natural hazards but a few require special planning.

The steps to take to prepare for a terrorist attack include:

- Assembling a disaster supply kit. Disaster supplies for terrorist incidents are the same as for other hazards and should definitely include a battery-powered radio with extra batteries and a cordless or cellular telephone. Those who live in high-risk areas (such as those who live within the 10-mile emergency planning zone around a nuclear facility) will be provided with additional information by their local emergency management agencies.
- Identifying a safe room in the home or workplace and a meeting place outside of the home or workplace. Because the public will not know in advance whether to evacuate or shelter in place, it is necessary to plan for both. Because many chemicals are heavier than air, a safe room in the house should be on the main level or second level (not in the basement) and should have as few doors and windows as possible. A meeting place outside of the home should be outside of the area and upwind from the incident.
- Develop a family communication plan. Depending on the family members' locations at the time of an attack, it may not be possible to get to the meeting place. Identifying an out-of-state or out-of-area contact or other communication plan will facilitate communication and the knowledge that family members are safe.

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- All of the above pertain to your team as well. Make sure you make the same arrangements for your team so that you can maintain communication and help support your community during a disaster.

Remember that:

- Team safety is the number one priority. All CERT members owe it to themselves and their loved ones not to become victims while trying to help others.
- Always do a thorough size-up and stop, look, listen, and think before taking any action.

Consider:

- Dangers, both evident and possible.
- Team capabilities, including how many CERT members are available, the training that they have had, and the equipment that is available at the scene.
- Team limitations.

NYC CERT protocols for Terrorist Incidents

- As with hazardous materials, terrorist incidents are a stop sign for CERT members.
- Take in the whole area during the size-up. If any of the indicators of a terrorist incident are present, do not proceed with the response.

If terrorism using a weapon of mass destruction is suspected, CERT teams will be very limited in what they can do. Professional responders will need specialized equipment and personnel to respond to a terrorist incident.

If you observe any of the indicators of a terrorist incident, you should:

- Not touch it!
- Move away from the object or area.
- Report it to authorities immediately.
- Cellular phones and two-way radios create static electricity and may detonate explosive devices. CERT members should always report suspected explosive devices via landline.

Self-Care during Terrorist Incidents

It is important to know what actions to take in a terrorist incident.

There are three factors that significantly affect safety at a terrorist incident:

- Time: limiting the amount of time in the area of an incident limits exposure.
- Distance: evacuate the area. Professional responders suggest maintaining distance of between 1,000 and 1,500 feet from the incident. Move upwind and uphill from the incident site.
- Shielding: the shielding provided by a sturdy building or even a wall can increase protection from contamination, radiation, or blast effects.

Time, distance, and shielding requirements are based on an initial size-up of the situation. If you are inside a building that is not damaged and you are not in immediate danger, you should listen to Emergency Alert System (EAS) broadcasts for information about whether to evacuate or shelter in place.

CERT members can expect professional responders to treat terrorist incidents much the same as hazardous materials incidents. As such, the next step that they will take is to establish three incident zones to minimize the risk of spreading contamination from the incident site.

- The hot zone includes the incident scene and the contaminated area around the scene. If the incident is outdoors, the hot zone will spread downwind, taking wind speed into consideration.

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- The warm zone is upwind from the hot zone and is used to isolate victims during decontamination. It is called the warm zone because the evacuees can carry or spread a contaminant into this area. Professional responders will hold those who require decontamination in the warm zone until decontamination is complete so that contaminants do not spread.
- The cold zone is located upwind and beyond the warm zone. Those who are not contaminated or who have been decontaminated will be evacuated to the cold zone and kept there until professional responders authorize them to leave.

If there are any reason to believe that chemical or radiological contamination has occurred in your area put distance between you and the agent. If exposed to a chemical agent or radiation, use basic decontamination procedures.

Be sure to heed the points listed below:

- Leave the contaminated area immediately (at least 1,000 to 1,500 feet upwind and uphill) to limit the time of exposure and reduce contamination levels.
- Take decontamination action. Seconds count! The goal is to limit the time that the agent is in contact with the skin.
 - Remove everything from the body, including jewelry. Cut off clothing that would normally be removed over the head to reduce the probability of inhaling the agent.
 - Wash hands before using them to shower.
 - Flush the entire body, including the eyes, underarms, and groin area, with copious amounts of cool water. Hot water opens the pores of the skin and can promote absorption of the contaminant. Using copious amounts of water is important because some chemicals react to small amounts of water.
 - If soap is immediately available, mix the soap with water for decontamination. Avoid scrubbing with soap because scrubbing can reduce the layer of protective skin, thus increasing absorption of the contaminant.
 - If working with a buddy, work together to decontaminate each other. If hosing someone else off, avoid physical contact with both the person and the runoff.
 - Blot dry using an absorbent cloth. Do not rub the skin! Put on clean clothes.
- Report for decontamination as soon as possible. Professional responders will be setting up decontamination stations somewhere around the site.

Treating Others

The first priority for CERT teams is personal safety. CERT members should take self-protective measures only. You should not attempt to treat victims in the contaminated area. CERT members can tell people who are leaving the area about using basic decontamination procedures and waiting for responders.

What First Responders Will Do

There are several measures that you can expect first responders to take when they arrive at the scene of a terrorist incident.

The first step that first responders will take is to conduct a thorough size-up. They will follow steps that are very similar to those that CERT members may take to determine:

- What is going on?
- How bad the situation is and how much worse could it get?
- What measures can be taken to control the incident safely?

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- What resources will be needed?

Reporting Possible Incidents

- 911 – for EMERGENCIES!
 - All crimes in progress.
 - If immediate Police, Fire, or EMS response is needed!
- 311 – Non-emergencies or information on City services.
 - Alternate side parking rules in effect
 - Garbage collection schedule
 - No heat / hot water complaints
 - Other general information
- 1-888-NYC-SAFE – Counter-terrorism hotline
 - Report suspected terrorist activity, 24 hours a day.
 - All calls are confidential.

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UNIT 10: DISASTER SIMULATION

UNIT INTRODUCTION

This module is a practical application of all the lessons you have learned over the past nine weeks. During this class, your entire team will respond to a variety of simulated emergencies that will test your knowledge of ICS, fire safety, light search and rescue, police science and terrorism awareness, disaster medical operations and triaging, and NYC's urban environment.

UNIT OBJECTIVES

- Review and practice the materials taught in Units 1-9.
- Put ICS into practical use to respond to a disaster.
- Practice personal and team safety.
- Practice NYC CERT deployment policy and procedure.
- Practice working as a team, where communication is vital.

UNIT REVIEW

Use everything you have learned in the last nine weeks to prepare you and your team members for this week's disaster simulation. Helpful hints: stay calm, communicate, and do not rush into action!

LOOKING FORWARD

Congratulations on successfully completing your NYC CERT 10-week course! Following graduation, you will either join your existing community team or you and fellow students will begin a new NYC CERT in your community district. You have much to offer your teams, so bring your enthusiasm and your new emergency and disaster knowledge to keep your community safe!

Final Scenario

Things you and your instructors will do in advance of your disaster simulation:

- Decide who the CERT Lead will be.
- Know who will lead and participate in operations, logistics, and planning.
- Have materials ready to respond *and* record.

What is going on?

It is late spring and severe thunderstorms are predicted in NYC.

NYC has been experiencing very unusual weather.

The time is approximately 7 PM.

The temperature outside is 45 degrees.

- How does this information benefit you?
- What planning do you need to make with respect to this information?

OEM Notifies Your Team

Your team chief is contacted by OEM Watch Command. Watch Command gives her the following information:

A tornado has touched down in your neighborhood.

The tornado's effects have devastated your community as well as surrounding neighborhoods.

The 911 system has been overtaxed.

First responders will be delayed.

Depiction of: Thunderstorms Path

- Based on your knowledge of the deployment protocol, what happens next?
- What do you do next?
- What does your team chief do next?
- What does your team do next?

Your Next Steps

It looks as though your CERT will be deployed.
Notify and assemble your team.

- What type of notification system does your team have?
- Does it work?
- Does your team practice (have call-downs)?
- Do members keep the information updated?
- What do you need to do to prepare yourself and your equipment before you assemble?

Your Team is Assembled

What do you do now?

- Write down your next steps below.
- What are some things based on your knowledge thus far, that you might be preparing for?

OEM provides more information:

Power has been lost throughout your neighborhood.

Signals are out and traffic is stagnating to the point of gridlock.

There have been numerous lightning strikes which have ignited small fires.

A tree has fallen and caused a 15-passenger van full of commuters to crash into a newspaper stand.

The worker from the stand is still missing and assumed to be beneath the debris.

The passengers on the bus are suffering various injuries and are in need of triage.

- What are the key areas that your team must address?
- What is the organized way to address these issues?

Address the following:

ICS

Fire Safety

Light Search & Rescue

Traffic Safety

Disaster Medical Operations

Are we a TEAM or a mob?

- What makes your CERT an asset?
- What makes it ineffective?

REVIEW YOUR STEPS

HOW DID WE DO?

- Be honest...what did you miss?
- Did you remember the following during your disaster simulation?
 - Keep safety as your number one priority.
 - Communicate clearly and slowly.
 - Respond as efficiently and quickly as you and your team members can.
 - Have fun!

Picture of: The Incident Command System Chart

What did your group decide?

- Review ICS often. If you don't use it, you lose it!

Incident Command System

Team notification
Assembling the team
Selection of CERT Lead
Communication capabilities
Deployment and resources
Record and observations and actions
Transfer of Command

- Were these parts of ICS covered by you and your team?
- If not, what was missing? Why?
- Think of ways to remember what you need to know.

Fire Safety

What did your group decide?

How did you organize and operate?

- Size-up the situation.
- Assess the type of fire and determine the safety concerns.
- If appropriate, you must choose the correct fire extinguisher and operate the extinguisher properly.
- What safety precautions must you take as CERT with respect to fires?

Fire Safety: Continued

Select Operational Leader

Fire Group Supervisor

Use PPE

Use proper extinguisher

Teams of two

Fires no larger than a wastepaper basket

“Overhaul”

- Did you remember your objectives?
- Was safety your number one priority?
- How well did your team communicate?

Light Search and Rescue

What did your group decide?

How did you organize and operate?

- Did you and your team:
 - Size-up the situation.
 - Assess the situation and determine safety concerns.
 - If appropriate, you will proceed with leverage and cribbing operation to extricate trapped victims.

Light Search and Rescue: Continued

Select a Leader.

Search and rescue group supervisor

Assemble resources from cache or on-scene.

Remove lightly trapped victims first.

Only enter lightly damaged structures.

Operate within your training and limitations of your crew.

Report findings to CERT Lead:

Victims located and removed.

Victims unable to be removed.

- How well did you communicate as a team?
- Did you have proper equipment to perform light search and rescue?
- What problems were encountered?

Traffic Safety

What did your group decide?

How did you organized and operate?

- Size-up the situation.
- Assess the situation and determine safety concerns.
- Is traffic management needed? Who will provide it?

Traffic Safety: Continued

Assign a traffic group supervisor. Proper Protective Gear:

Flashlight

Reflective vest

Whistle

Operate in teams of two.

Select appropriate roadways to manage traffic flow.

Restrict non-emergency personnel from entering the danger area.

- Was traffic management a priority? If not, why?
- Were any problems encountered by the team as they provided traffic management?
- Was communication among team members clear and sufficient to do the job?

Disaster Medical

What did your group decide?
How did you organize and operate?

Picture of: Triage tags

- Size-up the situation.
- Do victims need first aid and triaging when appropriate?
- Document signs, symptoms, and treatment provided.

Disaster Medical

Select a Medical Group Supervisor.

Perform Victim Triage (S.T.A.R.T)

Select Casualty Collection Point:

Remote from danger zone

Removed from elements

Document findings.

Report findings to CERT Lead.

- Did your team remember all the different parts of disaster medical operations?
- Were areas set up for triage?
- Were all the victims triaged?
- What problems occurred in relation to medical ops?

Transfer of Command

What did your group decide?

Picture of: Organization chart and reports

- In a real incident/emergency:
 - CERT Lead must complete the 201 Form and provide a copy to OEM and first responders.
 - CERT Lead must make sure all information is gathered during a response.

Transfer of Command

CERT Lead consolidates recorded info (ICS 201).

Upon arrival of first emergency responder:

Identify yourself and your team.

Report findings and tasks accomplished.

Make sure you only give accurate information.

Do not take a long time to exchange information.

- Was all the information about your team's response documented?
- Was communication among the CERT Lead, operation leaders, and members clear?
- Did members follow the chain of command?
- What problems occurred?

Transfer of Command: Continued

Turn over documented information:

Number of victims – trapped and removed – separated by triage color
Names of victims removed from the scene and to where they were transported
Locations of victims found and unable to be removed
Number and location of fires
Location of street closures

- When the CERT Lead provided the first responders with information, was it enough?
- Was any information left out?