Cuyahoga County Office of Emergency Management

Shelter-in-place and Evacuation Training for the General Public

June - 2012

Welcome to the training course for the general public.

The purpose of this course is to train you to safely evacuate and shelter-in-place in an emergency and to help others to do so.

Course Expectations

At the conclusion, there is an optional ten-question quiz that will lead to a certificate if you wish. In order to obtain a certificate, you'll need to create a user ID and password, register, and pass the quiz with a 70% score. (You can take the quiz more than once, if needed.)

This course should take approximately 2 hours to complete.

Course Overview

This training has been developed for persons of the general public.

The training describes how individuals can recognize and prepare for emergencies at their homes and work places, and gives specific information about preparation for SIP and evacuation orders, what to do when such orders are received, who gives these orders, and under what authority.

Training Objectives

By the end of this class, you should be able to:

- Know how to prepare for emergencies at home and at work
- Understand the National Incident Management System (NIMS)
- Know the emergencies common to Cuyahoga County
- Understand the difference between evacuation and shelter-in-place (SIP)
- Understand who gives the order to evacuate or SIP and how people are notified
- Understand why people with special needs or large groups may not be evacuated
- Know the risks of with SIP or evacuation

Introduction

The Cuyahoga County Office of Emergency Management has developed evacuation and shelter-in-place training for everyone in Cuyahoga County so that as a county, we are more prepared for common local emergencies. A communications campaign will also be run to inform the general public.

The general public has a variety of specific needs and responsibilities that will be addressed in this training module.

Communication Campaign

A communications campaign will inform the general public. It will include a video broadcast on television. The video can be found online at the following URL: http://emergency-preparedness.elearningclevelandstate.com/emergency_readiness_ad.wmv. It directs people to http://ready.cuyahogacounty.us.

KEY POINT

- ✓ ***Basic emergency preparedness at home includes identifying potential hazards and risks, then preparing for these hazards and risks by making an emergency plan and gathering disaster response supplies and tools.***

Emergency Checklist

The family emergency plan should include the following components:

- Escape routes from the home
- Family communication information including an out-of-state contact and a neighborhood meeting place

- Contact numbers for physicians, pharmacies, etc. (Copies of prescriptions for medications)
- Utility shut-off and safety information
- Insurance and vital records
- Special needs
- Caring for animals
- Safety skills such as First Aid and CPR

The family disaster kit should include:

- Provisions for 72 hours for each person
- Kits for at home, at work and in the car
- At least one gallon of water per person per day for 3-4 days
- Non-perishable food
- Portable, battery-powered radio and extra batteries.
- Multi-function crank flashlights/radios that do not require batteries or charging
- Flashlight and extra batteries
- First aid kit and manual
- Sanitation and hygiene items (moist towelettes and toilet paper)
- Matches in a waterproof container
- Multiple cans of sterno
- Whistle
- Extra clothing
- Kitchen accessories and cooking utensils, including a hand can opener
- Cash in small bills and coins
- Special needs items, such as prescription medications, eye glasses, contact lens solutions, and hearing aid batteries
- Items for infants, such as formula, diapers, bottles, and pacifiers
- Plastic trash bags to collect soiled items, dirty clothing, general trash. Large bags can also be used as additional insulation in cold weather, and as “ponchos” in wet weather.
- Other items to meet your unique family needs, including pet food and care items

People in Cuyahoga County may not have heat during an emergency. The temperature and weather may be inclement so emergency supplies should include:

- Jacket or coat
- Long pants
- Long sleeved shirt
- Sturdy shoes and warm socks; boots
- Hat, mittens and scarf
- Sleeping bag or warm blanket

Maintaining your disaster supply kit:

- Keep canned foods in a dry place where the temperature is cool.
- Store boxed food in tightly closed plastic or metal containers to protect from pests and extend its shelf life.
- Throw out any canned good that becomes swollen, dented or corroded.
- Use foods before they go bad, and replace them with fresh supplies.
- Place new items at the back of the storage area and older ones in the front.
- Change stored food and water supplies every six months. Be sure to write the date you store it on all containers.
- Re-think your needs every year and update your kit as your family needs change.
- Keep items in airtight plastic bags and put your entire disaster supplies kit in one or two easy-to-carry containers, such as an unused trashcan, camping backpack, duffel bag, or pull-along bag.
- Never let your vehicle gasoline tank go below one-half tank.

KEY POINT

✓ ***A good reference for home emergency preparedness is the FEMA document, "Are You Ready?"***

Online information at http://www.ready.gov is another valuable reference that is updated regularly.

Workplace emergency preparedness is similar to home preparedness

KEY POINT

✓ ***A time-limited acute health crisis is defined as any short term (i.e. hours) incident that will cause loss of life if no action is taken, loss of life is imminent.***

KEY POINT

✓ ***Evacuation** is the organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.*

✓ ***Shelter-in-Place (SIP)** is a process for taking immediate shelter in a location readily accessible to the affected individual.*

KEY POINT

✓ ***Emergencies common to Cuyahoga County are tornadoes, winter storms, floods, hazardous material releases, terrorism, radiological events, earthquakes, mudslides/landslides, and seiches (sudden fluctuations in Lake Erie's water level).***

The following is more specific information about these disasters.

TORNADOES:

A tornado appears as a rotating, funnel-shaped cloud that extends from storm clouds to the ground, but rain or clouds can hide them. Tornadoes may be hard to see until they pick up dust or debris.

The sky is often a dark, greenish color before and during a tornado. Tornadoes often sound like a freight train and include hailstones.

A tornado ***watch*** means that tornadoes are possible. People should remain alert, watch the sky and stay tuned to NOAA Weather Radio, commercial radio or television for information. A

tornado ***warning*** means that a tornado has been sighted or indicated by weather radar. People should take shelter immediately.

Severe Weather:

The Cuyahoga County Emergency Communications System (CECOMS) is staffed 24 hours a day and provides monitoring, notification, and warning to emergency response agencies and municipalities.

The National Weather Service (NWS) office provides the official weather forecast data, including winter storms, floods, tornadoes, thunderstorms, hailstorms, and any other weather related events.

Flooding:

The NWS issues flood advisories. A flash flood occurs within 6 hours of excessive rainfall and poses a threat to life and/or property.

1. **Flash Flood Watch:** A flash flood watch typically occurs 6 to 24 hours in advance of expected flooding.

1. **Flash Flood Warning:** A flash flood warning is issued when flooding is occurring or imminent.
2. **Flood Warning:** A flood warning is declared when general flooding is occurring, imminent or likely.

HAZARDOUS MATERIALS RELEASES:

Sometimes a plume of a gaseous chemical can be seen, however not all chemicals are visible. The only indicator might be a strange odor. People may have difficulty breathing or experience irritation of the eyes, skin, nose or respiratory tract. They may have headaches, blurred vision, or changes of skin color, dizziness, clumsiness or lack of coordination, or gastrointestinal effects like cramps or diarrhea.

RADIOLOGICAL DISPERSION DEVICE (DIRTY BOMB)

Only first responders will be able to distinguish a conventional explosion from an explosion that disperses radioactive materials. Notification will then be made by EAS, media announcements, and direct contact with responders.

NUCLEAR/RADIOLOGICAL:

There are four emergency classification levels at nuclear plants. People who live near nuclear power plants should be aware of these levels, but only need to take action if told to do so.

KEY POINT

✓ ***Know what to do if you are the first person to discover a dangerous situation:***

- Remove yourself and others from the danger to an area of safety or shelter.
- Call 911 as soon as possible and give as much information as you can about the danger.

Four emergency classification levels at nuclear plants:

1. **Unusual Event** - A small problem has occurred. No radiation leak is expected. Federal, State and County officials will be told right away. You should not have to do anything.
2. **Alert** – This is also a minor problem. You should not have to do anything.
3. **Site Area Emergency** – This is a more serious problem. Small amounts of radiation could leak from the plant. If you hear sirens, listen to a radio or TV station that broadcasts EAS messages. Federal, State, and County officials will help if you need to act.
4. **General Emergency** – This is the most serious problem. Radiation could be released outside the plant. When you hear the sirens, listen to the EAS radio or TV stations for instructions.

EARTHQUAKE:

Northeastern Ohio is the second most active earthquake area in the State. At least 20 earthquakes occurred here since 1836.

However, based on geology, Cuyahoga County has a low risk for damage due to an earthquake. Ohio has twenty-two seismographic monitoring stations (OhioSeis). Cuyahoga County has one station located at the Cleveland Museum of Natural History.

An example of a local time-limited acute health emergency

In 2009, an industrial factory had a nitric acid leak inside their facility. The facility manager notified the police and fire departments, the LEPC and Ohio SERC.

The police saw an orange plume over the facility and the fire department responded. The source of the cloud was a tank truck unloading product into a storage tank. The fire department and facility personnel secured and evacuated the area.

Hazmat was contacted, a command structure was set up and EPA was notified. The rail lines were shut down. No personnel were injured.

What is Evacuation?

Evacuation is the organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

What is Shelter-in-Place?

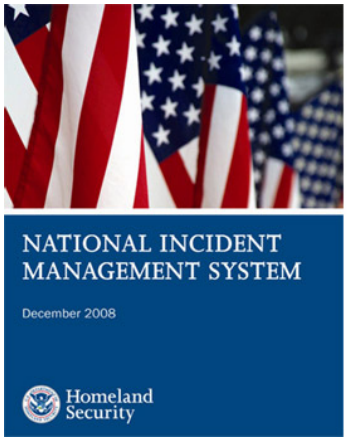
Shelter-in-place (SIP) is a process for taking immediate shelter in a location readily accessible to the affected individual.

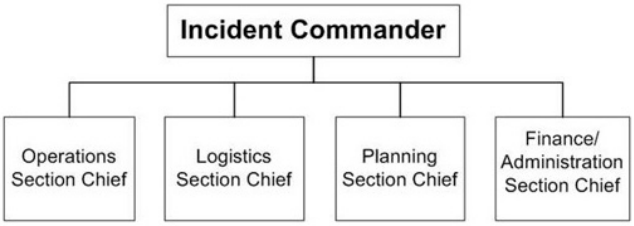
KEY POINT

✓ ***The National Incident Management System or NIMS is used to coordinate emergency response locally and throughout the U.S.***

NIMS is a simple framework and easy to implement.

Anyone can take the training for free on the web at http://training.fema.gov/





NIMS Activation Levels

The NIMS activation level is the organizational structure required to coordinate the response. There are five activation levels, from least to most severe.

- **TYPE 5** can be handled by the Incident Commander (IC) with one or two resources
- **TYPE 4** incidents require more resources, such as mutual aid, but usually is resolved within one workshift
- **TYPE 3** requires an expanded IC Structure, a written Action Plan and multiple work periods
- **TYPE 2** local capacity is exceeded, has full IC Staffing but less than 500 people
- **TYPE 1** is the most complex and requires national resources

Most incidents in Cuyahoga County are type 5 or 4

NIMS in Cuyahoga County

- 911 dispatch receives a call
- Police or firefighters arrive on the scene
- Responders assess the situation
- Depending on the situation, the Fire or Police Chief will be the IC
- The IC and responders solve the problem and call for more resources if needed
- Additional resources might include the hazmat team or local power company
- Everyone works together under the IC in a chain of command until the problem is resolved

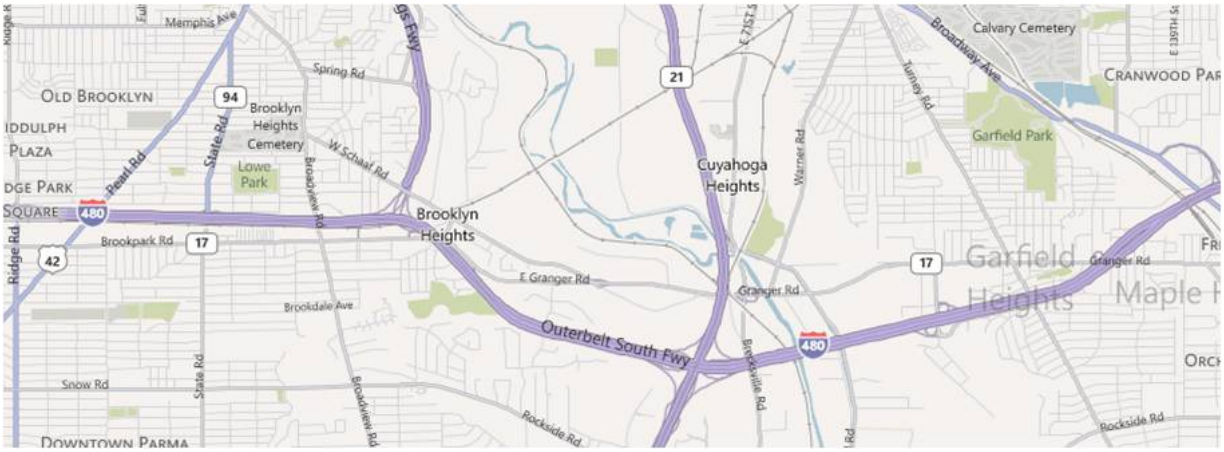
KEY POINT

✓ *Awareness of emergencies occurs through:*

- Our senses (e.g. sight, smell and hearing)
- Sirens, the Emergency Alert System (EAS)
- The media and Public Information Officers (PIOs)
- Special alarms at facilities with hazardous materials

An example of an emergency requiring evacuation

On March 25, 1991 a truck carrying a mixed load of different types of hazardous materials on Interstate 480 in Cleveland, Ohio suddenly caught fire. The driver immediately pulled over, disconnected the trailer from the tractor, and moved the tractor a safe distance away. The Cleveland Fire Department was notified and responded. They cordoned off the interstate, notified the hazmat team, and waited.



As a precaution, approximately 5,000 people were evacuated from an area approximately one square mile in size, including parts of Cleveland, Brookpark and Brooklyn. Evacuees were asked to go to local schools, and were not allowed to go back home until the next day.

Thousands of people's lives were disrupted that day, but no one was injured. This time-limited acute health crisis was effectively mitigated in part by the use of evacuation.

Another example of a local emergency requiring evacuation

In October 2011, a contractor struck and ruptured a 16 inch gas main. The City of Brooklyn, Ohio Fire Chief had to close Memphis Avenue from Tiedman Road to the Lindale line. The gas leak was 100 feet to the west of an adult training facility and 50 feet from two companies. The Brooklyn Fire Department and Dominion East Ohio Gas company meters showed explosive readings. The City of Brooklyn Fire Department ordered the 300+ personnel at the adult training facility to shelter-in-place a the east end of their facility. The Fire Department staged buses in the event that they would have to completely evacuate the training facility.

When the wind speed and direction changed, the Fire Chief had to shut down Conrail train activity and completely evacuate one of the trucking companies across the street and north of the leak. The Dominion East Ohio gas company finally was able to shut off the gas flow after about an hour and things returned to normal.

Why do people ignore alarms?

- Task persistence
- Denial and avoiding anxiety
- Social roles
- Risk perception
- Mental model
- Blinders

Workplace emergency plans should include?

- Who is empowered to dial 911
- Who else must be notified when 911 has been dialed
- How to describe the exact nature and location of the emergency within the facility
- A designated person to meet responders
- A designated location to meet the responders
- Clearly define roles for all personnel who are assigned duties in an emergency
- Intra-facility communications
- Evacuation plans
- Provisions for people with special needs

KEY POINT

✓ ***Know that employers are required to have an emergency action plan that includes procedures for emergency evacuation.***

All facilities, including sport venues, shopping malls, stores, downtown businesses, etc:

- Need emergency plans for evacuation and SIP
- Need provisions for people with special needs, including sight and hearing impaired people.

KEY POINT

✓ ***Know that emergency plans should include provisions for people with special needs.***

Special needs people are those who cannot, or feel they cannot, comfortably or safely access and use the standard resources offered in disaster preparedness, relief and recovery. Special needs conditions include:

- Mental or physical disability
- Non-English speaking
- Cultural isolation
- Medically or chemically dependent
- Homeless
- Frail or elderly
- Youth

KEY POINT

✓ ***Understand why an IC might choose to SIP populations with special needs or large populations rather than evacuate them.***

1. People with special needs require specific accommodations. Although facility managers know how to provide for the special needs of their clients, they may not be able to do so during an evacuation.
2. Incident commanders know that responders are not able to provide special accommodations. Attempting to evacuate people with special needs would be time and resource intensive and may expose them to the hazard.
3. In a large evacuation, the volume of people needing to relocate will overwhelm buses and other means of transportation. Recognizing this, incident commanders may decide to shelter special needs populations in place while evacuating the surrounding population.

4. Facilities that house minors have a specific need because they are required to retain custody of the minors in their care until released in to the custody of their parents or legal guardians. Due to this special need, incident commanders may choose to shelter minors (e.g., students) in place rather than attempting to evacuate them.
5. Office buildings and high-rise residential buildings generally have lower air exchange rates than single-story residential construction making them better suited for sheltering in place.

This fact, and the knowledge that evacuation routes and resources will be overwhelmed by a large-scale evacuation, might cause incident commanders to order populations in these structures to SIP rather than evacuate.

KEY POINT

✓ ***Understand county, regional, state and federal protocols for emergency response.***

County protocol for emergency response:

- Ohio Revised Code (ORC) 5502.26 requires every county to have an emergency management agency.
- The Cuyahoga County Office of Emergency Management (OEM) is responsible for coordinating emergency response.
- Each municipality should have its own Emergency Operations Plan (EOP) developed according to the FEMA guidelines.

KEY POINT

✓ ***Understand who has the authority to issue an evacuation or SIP order.***

The fire chief has the authority at the scene of a fire or other emergency involving the protection of life or property (ORC 1301:7-7-01 section 104.11) and in emergencies related to hazardous materials (ORC 3737.80).

KEY POINT

✓ ***Know where to obtain instructions about an evacuation or SIP order.***

- Radio stations with Emergency Alert Systems (EAS) are WTAM 1100 AM and WCPN 90.3 FM.
- TV stations WKYC TV 3, WEWS TV 5, WJW TV 8, WOIO TV 19, WVIZ TV 25 and WUAB TV 43.
- Some communities have mass notification or local emergency radio systems.

KEY POINT

✓ ***Understand the actions you need to take to safely evacuate your home.***

Know the evacuation route out of your residence (home, apartment building) and community.

Have a “to-go” kit, contact information (e.g., telephone numbers of family members) and cash in small bills.

KEY POINT

✓ ***Understand what you need to do to safely evacuate your workplace.***

- Know the evacuation plan and practice it routinely
- Know the elements of a good evacuation plan

A workplace evacuation plan should:

- Describe the conditions that require evacuation
- Identify who is authorized to initiate an evacuation
- Describe how employees and visitors will be told to evacuate
- Establish clearly marked evacuation routes with adequate lighting, etc.
- Identify floor wardens (if applicable) and their roles
- Describe the evacuation roles/responsibilities of all employees
- Establish procedures for those with special needs
- Designate meeting areas for all personnel
- Outline the procedure for accounting for everyone including the missing
- Is as building-specific as possible

KEY POINT

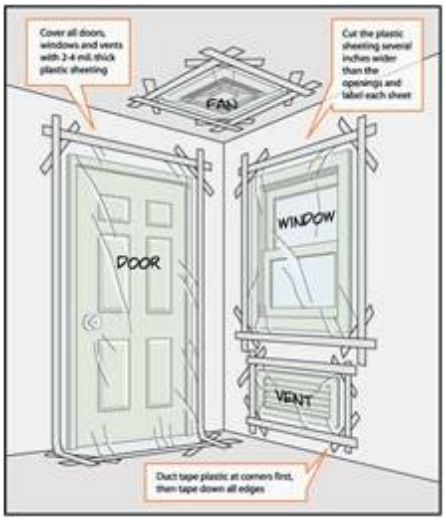
✓ ***Understand how you can be prepared to evacuate a facility when you are a visitor.***

- Clearly marked exits compliant with the Ohio Building Code
- A system of communicating the need for evacuation to all visitors
- Properly uniformed and credentialed employees so that visitors will follow their directions
- Employees who are trained to give accurate directions to visitors calmly and clearly

KEY POINT

✓ ***Understand how to SIP at home.***

- Choose an appropriate interior room, preferably with no windows, an adjoining bathroom, and storage for SIP supplies that is large enough for all the residents in your home or apartment.
- Measure all doors, windows, vents and skylights, then precut plastic sheeting to fit with an overlap of 6 inches all the way around.
- Gather appropriate supplies, tools and communication equipment.



Special Considerations for SIP:

People living in a multi-family dwelling should talk with neighbors about working together during an emergency. In addition, you should find out whether anyone has special equipment like a power generator, or expertise such as medical knowledge, that may be of assistance in a crisis. It is best to insure that everyone in your building is accounted for and make frequent checks on the elderly and disabled neighbors, especially anyone receiving oxygen on a regular basis, or who requires ventilatory support while sleeping.

Consider making a back-up plan for children in case they may not be able to get home. Routinely update the plan and practice procedures to be prepared when an emergency occurs.

When ordered to shelter-in-place:

- Bring family / friends and pets into the pre-selected room. Account for everyone.
- Access your emergency supply kit.
- Close and lock all windows and doors. Seal the opening at the bottom of the door with towels if possible.
- Turn off heating, ventilating and air conditioning systems (HVAC).
- Turn off vent fans and any other device that moves air. An exception to this might be an air purifier incorporating high-efficiency particulate air (HEPA) filters.
- Seal windows, doors, and vents with pre-cut plastic and duct tape. Tape all edges down all the way around.
- Contact family or friends to notify them of the location. Then do not use the telephone so that phone lines will be available for emergency responders.
- Monitor radio, TV and internet (if possible) for updates.
- Remain sheltered in place until told that it is safe or ordered to evacuate.

Shelter-in-place at work:

In addition to the steps taken to SIP at home, employers should:

- Write a SIP component in the Emergency Action Plan.
- Train all employees in their roles in the event of a SIP order.
- Communicate the dangers of leaving the building to everyone in the facility.
- Utilize call forwarding or an answering service to notify customers that your business is closed.
- Notify all employees to report to the pre-selected room. Account for everyone and document who is present and those who may be absent.
- Seal the room.
- Allow employees and customers to call family/friends to check in.
- Monitor radio, TV and internet (if possible) for updates.

- Communicate with safety forces to let them know the location and how many people are sheltered there.
- Remain sheltered in place until told that it is safe or ordered to evacuate.

Shelter-in-place in public facilities:

- Do not attempt to leave the facility.
- Listen for and follow official directions.
- Remain in the facility until you are given permission to leave or an order to evacuate.
- CERT members are trained in disaster psychology and can provide a valuable role by calming others during public SIP events either as volunteers or citizens.

KEY POINT

✓ ***Understand the potential risks due to evacuation.***

- Evacuees may be exposed to the hazard
- The mode of transportation (e.g., traffic congestion/gridlock, running out of fuel)
- Weather conditions may change, making evacuation ineffective or dangerous
- People with special needs may become emotionally agitated or injured

Potential risks of sheltering-in-place

- SIP reduces hazard exposures but does not eliminate it. Eventually contaminants enter the structure.
- SIP will be less effective in old or poorly maintained buildings.

Potential risks of both evacuation and sheltering-in-place

- If people are not trained and prepared either action can cause problems.
- If some people are evacuated while others are asked to SIP, people may become confused and upset.
- The media may give inaccurate information resulting in the wrong actions by the public.

Conclusion

Key messages for the general public:

- Maintain a 72 hour emergency kit and have a family communication plan.
- Maintain a current home emergency plan.
- Routinely practice evacuating and SIP at home and work.
- Know where to obtain information during emergencies.

Congratulations!

You've finished the evacuation and shelter-in-place training. You have just a few more steps in order to obtain your certificate of successful completion.

1. Please take the evaluation for the online training course at http://emergency-planning.elearningclevelandstate.com/feedback2/use/onlineCourseSurvey4/form1.html . You will need to close the new window when you are done and/or click back to this browser window to follow the next steps.
2. You'll need to register for the quiz (or log in if you have already).
3. Next, you'll take a ten-question quiz. You can take it more than one time, if needed. Once you receive a 70% or higher score, a printable certificate will appear. You can either save it as a .pdf or print it for your records.

The link below leads to a login screen. If you've never registered before, you'll do that first by clicking on the "register" link. You will create a user name and password and provide basic information such as your name and email address. If you have registered before, simply log in with your user name and password.

Thank you for taking the online course!

Take the final test online at
http://pro.elearningclevelandstate.com/RCC/login.php?ModuleID=GP