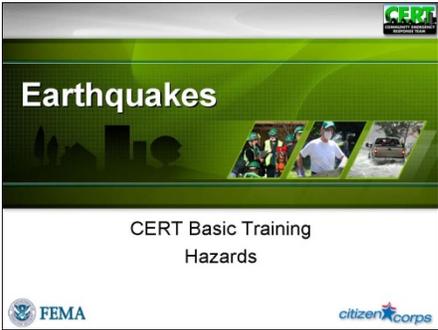
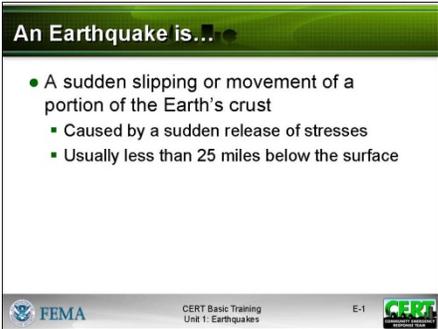


Earthquakes

INSTRUCTOR GUIDANCE	CONTENT
 <p>Earthquakes</p> <p>CERT Basic Training Hazards</p> <p>FEMA citizen corps</p> <p>Display Slide E-0</p>  <p>An Earthquake is...</p> <ul style="list-style-type: none">• A sudden slipping or movement of a portion of the Earth's crust<ul style="list-style-type: none">▪ Caused by a sudden release of stresses▪ Usually less than 25 miles below the surface <p>FEMA CERT CERT Basic Training Unit 1: Earthquakes E-1</p> <p>Display Slide E-1</p>	<p>Introduction</p> <p>Define <u>earthquake</u> as a sudden slipping or movement of a portion of the Earth's crust or <u>plates</u>, caused by a sudden release of stresses. Earthquake epicenters are usually less than 25 miles below the Earth's surface and are accompanied and followed by a series of vibrations. Earthquakes occur without any obvious warning.</p>

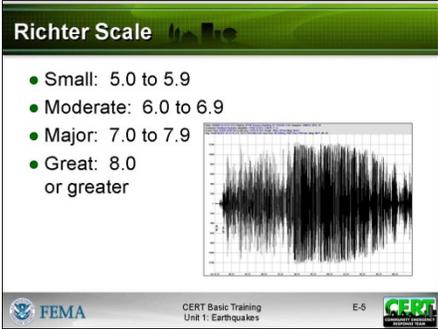
**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 401 675 453">Earthquake Damage</p> <ul data-bbox="261 468 634 621" style="list-style-type: none">● Collapsed buildings● Damage to utilities, structures, and roads● Fires and explosions● Structural instability, e.g., dams  <p data-bbox="240 695 675 726">FEMA CERT Basic Training Unit 1: Earthquakes E-2</p> <p data-bbox="240 762 496 793">Display Slide E-2</p> <p data-bbox="240 831 561 856">Loma prieta earthquake fema1.jpg</p>	<p data-bbox="706 384 1198 415">Damage Caused by Earthquakes</p> <p data-bbox="706 436 1487 506">Point out that the reason earthquakes are such a risk is because shaking ground can:</p> <ul data-bbox="706 527 1500 789" style="list-style-type: none">■ Cause buildings to move off of their foundations or collapse.■ Damage utilities, structures, and roads.■ Cause fires and explosions.■ Cause structural instability, such as dam failures that can trigger flash floods. <p data-bbox="706 810 1503 915">Earthquakes can also trigger landslides and avalanches or tsunamis. After an earthquake, it is important to listen for emergency instructions.</p> <p data-bbox="706 957 1455 1026">Together, all of these types of damage threaten lives, property, and the environment.</p>
<p data-bbox="240 1108 675 1161">Likelihood of an Earthquake</p> <ul data-bbox="261 1167 565 1371" style="list-style-type: none">● Greatest likelihood<ul data-bbox="285 1188 537 1276" style="list-style-type: none">■ Western United States<ul data-bbox="305 1213 537 1276" style="list-style-type: none">– San Andreas Fault– Western Oregon and Washington– Alaskan coast■ New Madrid Fault Zone in Missouri■ Few pockets on East Coast<ul data-bbox="305 1329 472 1371" style="list-style-type: none">– Coastal South Carolina– New England <p data-bbox="240 1392 675 1423">FEMA CERT Basic Training Unit 1: Earthquakes E-3</p> <p data-bbox="240 1461 496 1493">Display Slide E-3</p>	<p data-bbox="706 1083 1133 1115">Likelihood of an Earthquake</p> <p data-bbox="706 1136 1479 1205">Twenty-six urban areas in all parts of the United States are identified as carrying significant risk of earthquake:</p> <ul data-bbox="706 1226 1455 1509" style="list-style-type: none">■ The Western United States, particularly along the San Andreas Fault in California, the Cascadia Subduction Zone in western Oregon and Washington, and up the Alaskan coast■ The New Madrid Fault Zone in Missouri■ A few pockets on the east coast, including coastal South Carolina and New England

**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 615 675 945"><p>Earthquake Statistics</p><ul style="list-style-type: none">• 75 million Americans in 39 states face significant risk• Residents of California face the highest risk (17 million people) followed by residents of western Washington State• 4 million people along New Madrid Fault Zone at great risk• Residents of Massachusetts, North Carolina, and South Carolina also at risk<p>FEMA CERT Basic Training Unit 1: Earthquakes E-4</p></div> <p>Display Slide E-4</p>	<p>Earthquake Statistics</p> <p>Elaborate on the likelihood of earthquakes by supplying the following statistics:</p> <ul style="list-style-type: none">▪ More than 75 million Americans in 39 states face significant risk from earthquakes.▪ California's 17 million people face the highest risk, followed by the residents of western Washington State.▪ Four million people are within the destructive reaches of the New Madrid Fault. <p>Stress that hundreds of tremors are felt each year, particularly in California. Major earthquakes are rare, however. Five major earthquakes have occurred in the last century in the United States. They occurred in:</p> <ul style="list-style-type: none">▪ San Francisco, 1906 (700-800 lives lost)▪ Alaska, 1964 (131 lives lost)▪ San Fernando, California, 1971 (65 lives lost)▪ Loma Prieta (Northern California), 1989 (66 lives lost)▪ Northridge (Southern California), 1994 (61 lives lost) <p>Tell the group that there is no seasonal or yearly cycle of earthquake occurrence; earthquakes can happen at any time. Major earthquakes appear to occur in cycles of between 50 and 275 years.</p> <p>Explain that an earthquake may last for seconds or minutes, while aftershocks may occur for months after the main earthquake.</p>

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 506 675 835"><p>Richter Scale</p><ul style="list-style-type: none">● Small: 5.0 to 5.9● Moderate: 6.0 to 6.9● Major: 7.0 to 7.9● Great: 8.0 or greater<p>FEMA CERT Basic Training Unit 1: Earthquakes E-5</p></div> <p data-bbox="237 869 496 905">Display Slide E-5</p> <p data-bbox="237 936 617 993">Seismic News: Australia Oct 22, 2006</p> <div data-bbox="237 1583 316 1661"></div> <p data-bbox="237 1696 565 1766">Allow the group time to respond.</p>	<p data-bbox="704 386 974 422">The Richter Scale</p> <p data-bbox="704 476 1455 546">Explain that earthquakes are classified, based on the <u>Richter Scale</u>, as:</p> <ul data-bbox="704 564 1052 758" style="list-style-type: none">▪ Small: 5.0-5.9▪ Moderate: 6.0-6.9▪ Major: 7.0-7.9▪ Great: 8.0 or greater <p data-bbox="704 1037 1500 1182">Stress that the Richter Scale measures earth movement caused by an earthquake. The Richter Scale has a logarithmic base, so each increment on the scale is multiplied by a factor of 10.</p> <p data-bbox="704 1220 1500 1434">For example, an earthquake of magnitude 8.6 would not be twice as violent as one of 4.3, but rather would be 10,000 times worse. The 10 fold is in regard to amplitude. The actual energy released by an earthquake increases 31 times for each whole number increment.</p> <p data-bbox="704 1493 984 1528">Earthquake Safety</p> <p data-bbox="704 1583 1445 1652">What steps do you take to prepare for a possible earthquake?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 506 675 835"><p>Earthquake Preparedness</p><ul style="list-style-type: none">• Develop home earthquake plan• Conduct earthquake drills• Develop plan for reuniting family members• Develop family communication plan• Keep supplies on hand<p>FEMA CERT Basic Training Unit 1: Earthquakes E-6</p></div> <p data-bbox="237 869 496 905">Display Slide E-6</p> <div data-bbox="237 1297 675 1627"><p>Earthquake Preparedness</p><ul style="list-style-type: none">• Store heavy and breakable objects on low shelves• Secure bookshelves and water heaters• Install flexible pipe• Move beds away from windows• Move or secure hanging objects over beds, sofas, or chairs• Keep shoes and flashlight under bed<p>FEMA CERT Basic Training Unit 1: Earthquakes E-7</p></div> <p data-bbox="237 1661 496 1696">Display Slide E-7</p>	<p data-bbox="704 384 1101 420">Earthquake Preparedness</p> <p data-bbox="704 474 1487 543">Display the slide to summarize the discussion. Be sure that the suggestions below are mentioned:</p> <ul data-bbox="704 564 1495 1209" style="list-style-type: none">▪ <u>Develop a home earthquake plan</u> so that you know what to do during and after an earthquake.▪ <u>Conduct earthquake drills</u> with your family or coworkers. Locate safe spots (e.g., under a sturdy table), and identify danger zones (e.g., near windows).▪ <u>Develop a plan for reuniting all family members</u> after an earthquake occurs.▪ <u>Develop a family communication plan</u>. This includes identifying an out of state contact, informing that person of the duties and expectations that duty entails.▪ <u>Keep supplies on hand</u>, including food and water for 3 days, a flashlight with extra batteries, a portable radio, a fire extinguisher, and tools (see Assembling and Storing a Disaster Supply Kit in Unit 1). <p data-bbox="704 1266 1458 1335">Continue with preparedness measures by suggesting that the participants:</p> <ul data-bbox="704 1356 1503 1860" style="list-style-type: none">▪ <u>Store heavy and breakable objects on low shelves</u>. Weed killers, pesticides, and flammable products should be stored on bottom shelves or in closed cabinets with latches. Chemicals will be less likely to create hazards if they are stored in lower, confined locations.▪ <u>Secure bookshelves, water heaters, and tall furniture</u> to wall studs. Install latches on all cabinets, and anchor overhead lighting fixtures. Secure items that might fall, such as televisions.▪ Have a licensed professional <u>install flexible pipe</u> to avoid gas or water leaks. This pipe should be inspected regularly, and replaced every ten years.

COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the group time to respond.</p>	<ul style="list-style-type: none">▪ <u>Move beds away from windows.</u>▪ <u>Move or secure hanging objects</u> over beds, couches, and other places where people sit or lie.▪ <u>Keep shoes and a flashlight under the bed.</u> Keeping shoes under the bed ensures quick access to prevent cutting feet on glass and reduces the risk that glass could fall into them. <p>Suggest that the participants consult a structural engineer to evaluate their homes. Urge them to ask questions about home repair and strengthening for exterior features, such as porches, decks, sliding doors, canopies, carports, and garage doors.</p> <p>During an Earthquake</p> <p>If an earthquake happened right now, what do you think are the dangers in this room?</p> <p>What would you do to stay safe?</p> <p>Point out that during earthquakes, most injuries result from people being hit by falling objects and shattered glass, rather than being hurt in collapsing buildings. Stress that many injuries can be avoided if people take appropriate steps to prepare.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 401 675 730"><p>During an Earthquake</p><ul style="list-style-type: none">● Drop, cover, and hold● If indoors, stay there until shaking stops● If outdoors, find a spot away from buildings, trees, streetlights, power lines, and overpasses● If in a vehicle, drive to clear spot and stop<p>  CERT Basic Training Unit 1: Earthquakes E-8</p></div> <p data-bbox="237 762 496 800">Display Slide E-8</p>	<p data-bbox="704 369 1471 438">Suggest the following measures to stay safe during an earthquake:</p> <ul style="list-style-type: none">▪ <u>Drop, cover, and hold.</u> Move only as far as necessary to reach a safe place. Most persons injured in earthquakes move more than 5 feet during the shaking.▪ <u>If indoors, stay there until the shaking stops.</u> Many fatalities occur when people run outside, only to be killed by falling debris from collapsing walls. It is safer to stay indoors until the shaking stops and it is safe to exit. When going outdoors, move quickly away from the building to prevent injury from falling debris. <p data-bbox="751 892 1495 997">Tell the participants that there is a 20% chance of an equal or larger quake in the 2 hours following an earthquake.</p> <ul style="list-style-type: none">▪ <u>If outdoors, find a spot away from buildings, trees, streetlights and power lines, and overpasses.</u> Drop to the ground and stay there until the shaking stops. Injuries can occur from falling trees, street lights and power lines, or building debris.▪ <u>If in a vehicle, pull over at a clear location free of hazards and stop.</u> Stay in the vehicle with seatbelt fastened until the shaking stops. Turn on the radio to get information regarding the quake and any damage to roadways that may have occurred.

COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES

INSTRUCTOR GUIDANCE	CONTENT
<p> Allow the group time to respond.</p> <p>After an Earthquake</p> <ul style="list-style-type: none">• First:<ul style="list-style-type: none">▪ Check selves for injuries▪ Protect selves from further danger• Then:<ul style="list-style-type: none">▪ Extinguish small fires▪ Clean up spills▪ Inspect home for damage▪ Help neighbors▪ Tune to Emergency Alert System (EAS)▪ Expect aftershocks <p>FEMA CERT Basic Training Unit 1: Earthquakes E-9</p> <p>Display Slide E-9</p>	<p>Provide the following tips based on the area in which you live:</p> <ul style="list-style-type: none">▪ <u>If in a high-rise building</u>, expect the fire alarms and sprinklers to go off during an earthquake. Check for and extinguish small fires. Do <u>not</u> use the elevators.▪ <u>If in a coastal area</u>, move to higher ground. Earthquakes often generate tsunamis.▪ <u>If in a mountainous area or near unstable slopes or cliffs</u>, be alert for falling rocks and other debris that could be loosened by the earthquake. Also, watch for landslides that could be triggered by the earthquake. <p>What is the first thing you should do following an earthquake?</p> <p>Stress that immediately following an earthquake, they should:</p> <ul style="list-style-type: none">▪ <u>Check themselves for injuries</u>. Often, people tend to check on others without checking themselves. Point out that the participants will be better able to help others if they are not injured or if they have received first aid for their injuries.▪ <u>Protect themselves from further danger</u> by putting on long pants, a long-sleeved shirt, sturdy shoes or work boots, and work gloves.

COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES

INSTRUCTOR GUIDANCE	CONTENT
 <p>PM, P. E-5</p>	<p>After an Earthquake</p> <p>Suggest that, after the participants have taken care of themselves, they should:</p> <ul style="list-style-type: none">▪ <u>Look for and extinguish small fires.</u> Fire is the most common hazard following earthquakes. Extinguishing small fires and eliminating fire hazards will minimize the risk of a fire getting out of control.▪ <u>Clean up spills.</u> By cleaning up medicines, bleaches, flammables, and other spills, it is possible to prevent many small but potentially dangerous hazardous materials emergencies.▪ <u>Inspect the home for damage.</u> Aftershocks can cause additional damage to unstable buildings. If there are major cracks in the chimney or foundation or if the home or utilities have been moved by the earthquake, get everyone out of the home. Take photographs of the home and its contents to document insurance claims.▪ <u>Help neighbors</u> who may require assistance.▪ <u>Tune to the Emergency Alert System (EAS)</u> for emergency information and instructions.▪ <u>Expect aftershocks.</u> Aftershocks often occur minutes, days, or weeks following an earthquake. When aftershocks occur, drop, cover, and hold. Remember that there is a 20% chance of an equal or larger quake within a few hours. <p>Ask the participants if anyone has additional questions, comments, or concerns about earthquakes.</p> <p>Refer the participants to <i>Earthquake Myths and Facts</i> in the Participant Manual. Suggest that the participants read through the myths and facts after the session.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

PM, P. E-5	Earthquake Myths and Facts
Myth:	“Mega-Quakes” can happen.
Fact:	<p>Strictly speaking, mega-quakes of magnitude 10 or more are possible; however, scientists agree that they are implausible. The magnitude of an earthquake is related to the length of the fault on which it occurs—the longer the fault, the larger the earthquake. The San Andreas Fault is only 800 miles long. To generate an earthquake of 10.5 magnitude would require the rupture of a fault that is many times the length of the San Andreas Fault. No fault long enough to generate a magnitude 10.5 earthquake is known to exist. The largest earthquake ever recorded was a magnitude 9.5 on May 22, 1960 in Chile on a fault that is almost 1,000 miles long.</p>
Myth:	Earthquakes only occur on the West Coast in the United States.
Fact:	<p>Earthquakes can strike any location at any time. But history shows they occur in the same general patterns over time, principally in three large zones of the earth. The world's greatest earthquake zone, the circum-Pacific seismic belt, is found along the rim of the Pacific Ocean, where about 81 percent of the world's largest earthquakes occur. That belt extends from Chile, northward along the South American coast through Central America, Mexico, the West Coast of the United States, the southern part of Alaska, through the Aleutian Islands to Japan, the Philippine Islands, New Guinea, the island groups of the Southwest Pacific, and to New Zealand. The second important belt, the Alpide, extends from Java to Sumatra through the Himalayas, the Mediterranean, and out into the Atlantic. This belt accounts for about 17 percent of the world's largest earthquakes, including some of the most destructive. The third prominent belt follows the submerged mid-Atlantic ridge. The remaining shocks are scattered in various areas of the world. Earthquakes in these prominent seismic zones are taken for granted, but damaging shocks occur occasionally outside these areas. Examples in the United States are New Madrid, Missouri, and Charleston, South Carolina. Many decades to centuries, however, usually elapse between such destructive shocks.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
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PM, P. E-5	Earthquake Myths and Facts
Myth:	The 1906 San Francisco earthquake was the deadliest ever.
Fact:	Though well known, the magnitude 7.8 San Francisco earthquake and ensuing fire killed 700-800 and razed large sections of the city. It was the most deadly in U.S. history, but that doesn't make it the worst the world has seen, by far. The deadliest earthquake in recorded history struck Shensi province in China in 1556, killing about 830,000 people. The 1976 magnitude 7.8 earthquake which struck Tangshan, China killed somewhere between 250,000 and 800,000 people. In 2003, the magnitude 6.5 earthquake in Bam, Iran killed more than 40,000 people. The earthquake in Chile on May 22, 1960, is the strongest to be recorded in the world with magnitude 9.5, and killed more than 4,000. For the record, the largest U.S. earthquake occurred on March 28, 1964, in Alaska. It was a magnitude 9.2 quake and took 131 lives.
Myth:	California has the most earthquakes in the country.
Fact:	Alaska registers the most earthquakes in a given year, with California placing second. California, however, has the highest risk and most damaging earthquakes because of its greater population and extensive infrastructure. Florida and North Dakota have the fewest earthquakes each year.
Myth:	The ground can open up during an earthquake.
Fact:	A popular cinematic device is a fault that opens during an earthquake to swallow up an inconvenient character, but gaping faults exist only in movies and novels. The ground moves across a fault during an earthquake, not away from it. If the fault could open, there would be no friction. Without friction, there would be no earthquake. Shallow crevasses can form during earthquake induced landslides or other types of ground failures. Faults, however, do not gape open during an earthquake.

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PM, P. E-5	Earthquake Myths and Facts
Myth:	California will eventually fall into the ocean.
Fact:	The ocean is not a great hole into which California can fall, but it is itself land at a somewhat lower elevation with water above it. It's absolutely impossible that California will be swept out to sea. Instead, southwestern California is moving horizontally northward towards Alaska as it slides past central and eastern California. The dividing point is the San Andreas fault system, which extends from the Salton Sea in the south to Cape Mendocino in the north. This 800 mile long fault is the boundary between the Pacific Plate and North American Plate. The Pacific Plate is moving to the northwest with respect to the North American Plate at approximately 46 millimeters (2 inches) per year (the rate your fingernails grow). At this rate, Los Angeles and San Francisco will one day (about 15 million years from now) be next-door neighbors, and in an additional 70 million years, Los Angeles residents will find themselves with an Alaska zip code!
Myth:	People can stop earthquakes.
Fact:	We cannot prevent earthquakes from happening (or stop them once they've started). However, we can significantly mitigate their effects by characterizing the hazard (e.g., identifying earthquake faults, unconsolidated sediment likely to amplify earthquake waves, and unstable land prone to sliding or liquefying during strong shaking), building safer structures, and preparing in advance by taking preventative measures and knowing how to respond.
Myth:	Lots of small earthquakes can prevent large earthquakes.
Fact:	Seismologists have observed that for every magnitude 6 earthquake there are about 10 of magnitude 5, 100 of magnitude 4, 1,000 of magnitude 3, and so forth as the events get smaller and smaller. This sounds like a lot of small earthquakes, but there are never enough small ones to eliminate the occasional large event. It would take 32 magnitude 5's, 1000 magnitude 4's, and 32,000 magnitude 3's to equal the energy of one magnitude 6 event. So, even though we always record many more small events than large ones, there are far too few to eliminate the need for the occasional large earthquake.

**COMMUNITY EMERGENCY RESPONSE TEAM
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PM, P. E-5	Earthquake Myths and Facts
Myth:	We can predict earthquakes.
Fact:	Earthquake prediction is the holy grail for earthquake scientists, but there currently is no accepted method to accomplish the goal of predicting the time, place, and magnitude of an impending quake. Research into earthquake prediction continues. However, the USGS approach has been to focus on providing long-range forecasts of the likelihood locations and impacts of damaging earthquakes. For example, scientists estimate that over the next 30 years the probability of a major earthquake occurring in the San Francisco Bay area is 62% and 60% in Southern California. Scientists are also able to predict the type of ground motion to expect based on the geology and the history of earthquake activity of the region. Engineers and building code developers use these models of site response to improve the safety of structures, thereby reducing the ultimate earthquake risk.
Myth:	Animals can predict earthquakes.
Fact:	Changes in animal behavior cannot be used to predict earthquakes. Even though there have been documented cases of unusual animal behavior prior to earthquakes, a reproducible connection between a specific behavior and the occurrence of an earthquake has not been made. Because of their finely tuned senses, animals can often feel the earthquake at its earliest stages before the humans around it can. This feeds the myth that the animal knew the earthquake was coming. But animals also change their behavior for many reasons, and given that an earthquake can shake millions of people, it is likely that a few of their pets will, by chance, be acting strangely before an earthquake.
Myth:	It's been raining a lot, or very hot--it must be earthquake weather!
Fact:	Many people believe that earthquakes are more common in certain kinds of weather. In fact, no correlation with weather has been found. Earthquakes begin many kilometers (miles) below the region affected by surface weather. People tend to notice earthquakes that fit the pattern and forget the ones that don't. Also, every region of the world has a story about earthquake weather, but the type of weather is whatever they had for their most memorable earthquake. It is also a myth that big earthquakes always happen at a particular time of day.

**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

PM, P. E-5	Earthquake Myths and Facts
Myth:	Good building codes mean safe buildings.
Fact:	Architects and engineers are using knowledge learned from past earthquakes to make roads, bridges, and buildings safer in the event of major earthquakes. Local officials are also enacting new building codes to ensure new buildings are built with earthquake safety in mind. This includes both improving the design of new buildings and bridges as well as strengthening older units to incorporate the latest advances in seismic and structural engineering. But the best building codes in the world do nothing for buildings built before that code was enacted. While the codes have been updated, the older buildings are still in place. Fixing problems in older buildings—also known as retrofitting—is the responsibility of the building's owner.
Myth:	Earthquakes kill people.
Fact:	In an earthquake, the severity of the shaking can cause manmade and natural structures and the contents within these to fail or fall and injure or kill people. There have been large earthquakes with very little damage because they caused little shaking and/or buildings were built to withstand that shaking. In other cases, smaller earthquakes have caused great shaking and/or buildings collapsed that were never designed or built to survive shaking. Much depends on 2 variables: geology and engineering. From place to place, there are great differences in the geology at and below the ground surface. Different kinds of geology will do different things in earthquakes. For example, shaking at a site with soft sediments can last 3 times as long as shaking at a stable bedrock site such as one composed of granite. Local soil conditions also play a role, as certain soils greatly amplify the shaking in an earthquake. A soft, loose soil will shake more intensely than hard rock at the same distance from the same earthquake. Fires are another major risk during earthquakes as gas lines may be damaged and particularly hazardous.

**COMMUNITY EMERGENCY RESPONSE TEAM
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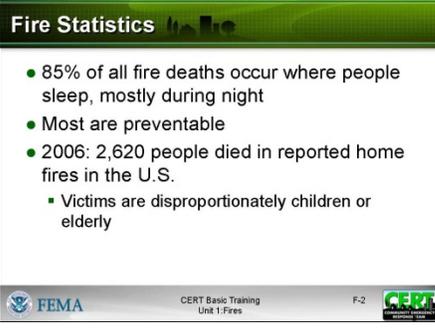
PM, P. E-5	Earthquake Myths and Facts
Myth:	During an earthquake you should head for the doorway.
Fact:	That's outdated advice. In past earthquakes in unreinforced masonry structures and adobe homes, the door frame may have been the only thing left standing in the aftermath of an earthquake. Hence, it was thought that safety could be found by standing in doorways. In modern homes doorways are no stronger than any other parts of the house and usually have doors that will swing and can injure you. YOU ARE SAFER PRACTICING THE "DROP, COVER, AND HOLD" maneuver under a sturdy piece of furniture like a strong desk or table. If indoors, stay there. Drop to the floor, make yourself small and get under a desk or table or stand in a corner. If outdoors, get into an open area away from trees, buildings, walls and power lines. If in a high-rise building, stay away from windows and outside walls, stay out of elevators, and get under a table. If driving, pull over to the side of the road and stop. Avoid overpasses and power lines. Stay inside your car until the shaking is over. If in a crowded public place, do not rush for the doors. Crouch and cover your head and neck with your hands and arms. You should practice the "DROP, COVER, AND HOLD" method at work and at home at least twice a year.
Myth:	Everyone will panic during the Big One.
Fact:	A common belief is that people always panic and run around madly during and after earthquakes, creating more danger for themselves and others. Actually, research shows that people usually take protective actions and help others both during and after the shaking. Most people don't get too shaken up about being shaken up!

Source: U. S. Geological Survey, *Earthquake Facts and Earthquake Fantasy*, http://earthquake.usgs.gov/learning/topics/megaqk_facts_fantasy.php

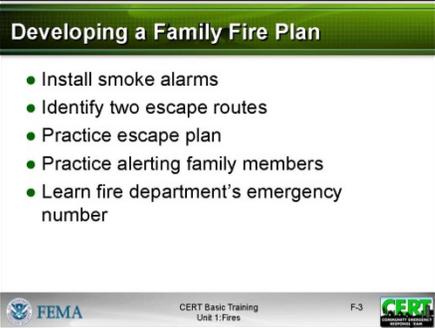
**COMMUNITY EMERGENCY RESPONSE TEAM
EARTHQUAKES**

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Fire

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 506 675 835"></p> <p data-bbox="240 873 493 905">Display Slide F-0</p> <p data-bbox="240 947 675 1276"></p> <p data-bbox="240 1314 493 1346">Display Slide F-1</p> <p data-bbox="240 1388 675 1717"></p> <p data-bbox="240 1755 493 1787">Display Slide F-2</p>	<p data-bbox="719 485 792 516">Fire</p> <p data-bbox="719 541 1498 646">Explain that in 2006 fire killed more Americans than all natural disasters combined. Additionally, fire resulted in direct property damages in excess of 11 billion dollars.</p> <p data-bbox="719 722 1438 753">Elaborate on the dangers that fires pose, including:</p> <ul data-bbox="719 772 1507 1094" style="list-style-type: none">▪ Asphyxiation: Asphyxiation is the leading cause of death in a fire, by a three-to-one ratio over burns.▪ Heat: A fully developed room fire has temperatures over 1,100 degrees Fahrenheit.▪ Smoke: Fire generates black, impenetrable smoke that blocks the vision, stings the eyes, and clogs the lungs. It may be impossible to navigate through such smoke. <p data-bbox="719 1381 987 1413">Fires in the Home</p> <p data-bbox="719 1457 1498 1640">Point out that roughly 85 percent of all fire deaths occur where people sleep, such as in homes, dormitories, barracks, or hotels. The majority of fatal fires occur when people are less likely to be alert, such as during nighttime sleeping hours.</p> <p data-bbox="719 1682 1498 1864">Stress that nearly all home and other building fires are preventable, even arson fires. The majority of arson fires are caused by juveniles who often respond to counseling, and the rest can be deterred in a number of ways. <u>No fire is inevitable.</u></p>

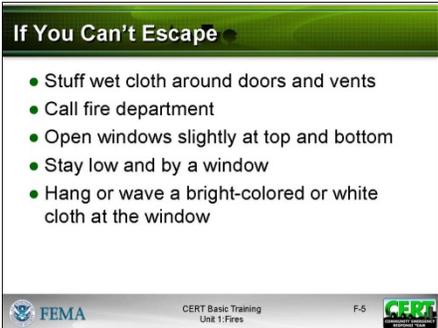
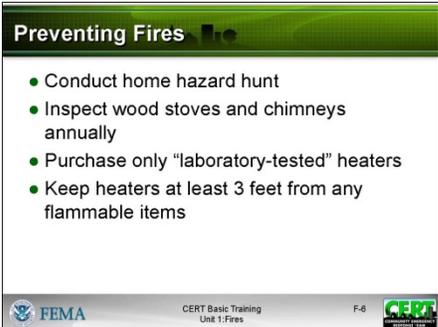
**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Display Slide F-3</p>	<p>Tell the group that in 2006, 2,620 people died in reported home fires in the United States—about 7 people per day. In addition, thousands of people were injured in home fires, many with severe burns (USFA).</p> <p>Point out that fire victims are disproportionately children or the elderly. One out of every four fires that kill young children is started by children playing with fire (NFPA 2003).</p> <p>Approximately 900 senior citizens die in fires annually.</p> <p>What steps have you taken to prepare for fires in your home?</p> <p>Stress that the key to fire preparedness is a family fire plan. Every family fire plan should include:</p> <ul style="list-style-type: none">▪ <u>Smoke alarms</u> on every level of the home and near all sleeping areas.▪ <u>Two escape routes</u> from every room in the home. Escape ladders should be a consideration for sleeping areas on upper floors. These ladders should be stored near windows.▪ <u>Practice the escape plan</u> at least twice each year. Practice getting out both day and night. Practice escapes should include low-crawl escapes, ensuring that all family members' heads are one to two feet above the floor. As part of escape planning, select a safe area outside the home for the family to gather after escaping the fire. Ensure that all know to meet at that place so, when firefighters arrive, they can be notified quickly of family status.▪ <u>Practice alerting family members</u> by yelling “Fire!” several times. In a real fire, this alert may help family members escape.

COMMUNITY EMERGENCY RESPONSE TEAM
FIRE

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="237 821 315 890"></p> <p data-bbox="237 894 643 961">Allow the participants time to respond.</p> <div data-bbox="237 1001 675 1331"></div> <p data-bbox="237 1367 493 1398">Display Slide F-4</p> <p data-bbox="237 1436 586 1482">http://www.chattanooga.gov/Images_Editor/DSC_2003.jpg</p>	<ul style="list-style-type: none"><li data-bbox="721 369 1490 541">▪ <u>Learn the fire department's emergency number</u>, especially if the community does not have 9-1-1 service. Make sure that all family members know to escape the fire first, then call the fire department from a neighbor's home. <p data-bbox="721 590 1503 762">Stress the importance of discussing with the entire family what to do in a fire. Every family member needs to know what to do in case the entire family is not together when a fire occurs. Also, awareness helps to reduce fear and ensures that all family members know what to do.</p> <p data-bbox="721 821 1398 852">What should you do if a fire starts in your home?</p> <p data-bbox="721 1010 1430 1077">Stress that, if the participants see a fire or hear the smoke alarm, they should:</p> <ul style="list-style-type: none"><li data-bbox="721 1098 1503 1199">▪ <u>Yell "Fire!" several times and exit quickly</u>. Never use an elevator when escaping a fire. Other points to remember include:<ul style="list-style-type: none"><li data-bbox="769 1224 1490 1291">• If escaping through smoke, crawl low, under the smoke.<li data-bbox="769 1316 1503 1451">• If escaping through a closed door, look first at the door. If air is being sucked under the door or smoke is seeping out the top of the door, <u>do not open the door</u>.<li data-bbox="769 1476 1503 1652">• If there is no sucking air or escaping smoke, feel the door with the back of the hand, as well as the space between the door and its frame and the doorknob before opening the door. <u>Never open a door that feels hot</u>.<li data-bbox="721 1677 1490 1854">▪ <u>Go to the agreed upon meeting place</u>, then send one person to call the fire department. Gathering at the meeting place first will quickly indicate who is outside and allow family members to advise firefighters immediately when they arrive.

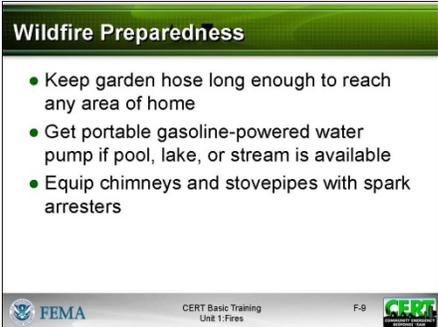
**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 394 675 722"><p>If You Can't Escape</p><ul style="list-style-type: none">● Stuff wet cloth around doors and vents● Call fire department● Open windows slightly at top and bottom● Stay low and by a window● Hang or wave a bright-colored or white cloth at the window<p>FEMA CERT Basic Training Unit 1: Fires F-5</p></div> <p data-bbox="237 726 472 758">Display Slide F-5</p> <div data-bbox="237 1010 315 1083"></div> <p data-bbox="237 1125 646 1192">Allow the participants time to respond.</p> <div data-bbox="237 1266 675 1593"><p>Preventing Fires</p><ul style="list-style-type: none">● Conduct home hazard hunt● Inspect wood stoves and chimneys annually● Purchase only "laboratory-tested" heaters● Keep heaters at least 3 feet from any flammable items<p>FEMA CERT Basic Training Unit 1: Fires F-6</p></div> <p data-bbox="237 1598 472 1629">Display Slide F-6</p>	<p data-bbox="716 363 1474 468">Tell the group that, if smoke, heat, or flames block all exit routes, they should stay in the room with the door closed.</p> <ul data-bbox="716 489 1498 951" style="list-style-type: none">▪ <u>Stop up areas where smoke could come in</u> using wet towels, sheets, or clothes under doors and in vents.▪ <u>Call the fire department</u> and tell them where you are—even if the fire department has already been called.▪ <u>Open windows slightly at top and bottom</u> to allow smoke to exit and fresh air to enter the room.▪ <u>Stay low and near a window</u> to breathe fresh air.▪ Hang or wave a bright-colored or white cloth at the window to signal the fire department when they arrive. <p data-bbox="716 1031 1450 1062">What can you do to prevent a fire in your home?</p> <p data-bbox="716 1234 1130 1266">Suggest that the participants:</p> <ul data-bbox="716 1287 1498 1864" style="list-style-type: none">▪ <u>Conduct a home hazard hunt.</u> Many items and conditions around the home can present fire hazards. Taking time to look for and eliminate hazards will reduce the risk.▪ <u>Inspect wood stoves and chimneys annually.</u> Burning wood leaves creosote deposits which are flammable in the firebox, flue, and chimney. These buildups must be removed professionally to minimize the risk of fire.▪ <u>Purchase heaters only if they have been laboratory tested and approved.</u> Follow the manufacturer's directions for use. Keep blankets, clothing, curtains, furniture, and any other flammable items at least 3 feet away from heat sources. Plug heaters directly into a wall socket, and unplug them when they are not in use.

**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 359 675 688"><p>Preventing Fires (contd.)</p><ul style="list-style-type: none">● Keep matches and lighters away from children● Check electrical wiring● Keep combustibles away from stove<p>FEMA CERT Basic Training Unit 1: Fires F-7</p></div> <p data-bbox="237 722 493 758">Display Slide F-7</p> <p data-bbox="237 1052 675 1230">The next section covers wildfires. Do not present this section unless the participants live or work in areas that are at high risk of wildfires.</p> <div data-bbox="237 1268 675 1598"><p>3 Classes of Wildfires</p><ul style="list-style-type: none">● Surface fire● Ground fire● Crown fire<p>FEMA CERT Basic Training Unit 1: Fires F-8</p></div> <p data-bbox="237 1631 493 1667">Display Slide F-8</p> <p data-bbox="237 1724 621 1791">http://www.community.gov.yk.ca/images/2005_strcutpro_big.jpg</p>	<ul style="list-style-type: none">▪ <u>Keep matches and lighters away from children.</u> Children are fascinated by fire and will play with matches and lighters if they are available.▪ <u>Check electrical wiring</u> and replace frayed extension cords, exposed wires, or loose plugs. Ensure that all outlets have cover plates, and avoid overloading outlets or extension cords.▪ <u>Keep combustible materials away from the stove,</u> including towels, clothing, curtains, bags, boxes, and other appliances. Combustible materials near stoves can catch fire quickly while the cook's attention is elsewhere. <p data-bbox="716 867 1487 1010">Point out that these are only a few suggestions for preventing fires. Additional suggestions, including how to select and use fire extinguishers, will be covered in Unit 2, Fire Safety.</p> <p data-bbox="716 1052 1507 1119">Transition to wildfires by telling the group that they need to prepare for outdoor fires as well as fires in the home.</p> <p data-bbox="716 1287 854 1318">Wildfires</p> <p data-bbox="716 1346 1479 1377">Tell the group that there are three classes of wildfires:</p> <ul style="list-style-type: none">▪ A <u>surface fire</u> is the most common type of fire and burns along the floor of a forest, moving slowly and killing or damaging trees.▪ A <u>ground fire</u> is usually started by lightning and burns on or below the forest floor in the humus layer down to the mineral soil.▪ <u>Crown fires</u> spread rapidly by wind and move quickly by jumping along the tops of trees. <p data-bbox="716 1734 1507 1839">Point out that wildfires often begin unnoticed and that many fires can spread quickly, igniting brush, trees, and homes.</p>

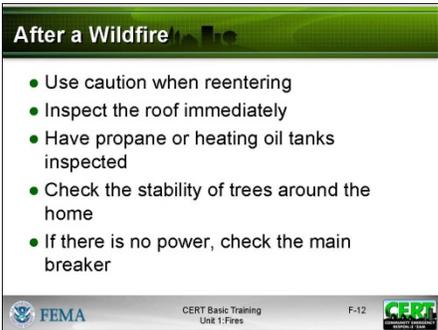
**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Wildfire Preparedness</p> <ul style="list-style-type: none">● Keep garden hose long enough to reach any area of home● Get portable gasoline-powered water pump if pool, lake, or stream is available● Equip chimneys and stovepipes with spark arresters <p>FEMA CERT Basic Training Unit 1: Fires F-9</p>	<p>Tell the group that because more people are choosing to make their homes in woodland settings in or near forests, rural areas, or remote mountain sites, a greater percentage of the population is becoming vulnerable to the hazards of wildfire.</p> <p>Explain that more than four out of every five forest fires are started by people. Negligent human behavior, such as smoking in forested areas or improperly extinguishing campfires, is the cause of many forest fires.</p> <p>Point out that improper design, combustible materials and landscaping, and lack of attention to weed abatement in woodland residential areas contribute to the hazard to humans and animals.</p> <p>Explain that some of the strategies for wildfire preparedness are the same as for fires in the home, and that developing a family fire escape plan will be helpful for wildfires as well as fires in the home. In the case of wildfires, some additional strategies are required.</p> <p>Tell the group that they should:</p> <ul style="list-style-type: none">▪ <u>Keep a garden hose that is long enough to reach any area of the home</u> and other structures. Buy a ladder that is high enough to reach the roof.▪ <u>If a pool, lake, or stream is available, consider obtaining a portable gasoline-powered water pump.</u>▪ <u>Equip chimneys and stovepipes with spark arresters.</u>▪ <u>Keep fire tools handy.</u> Fire tools include shovels, rakes, axes, chain or handsaws, buckets, and one or more fire extinguishers.

**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 359 675 688" data-label="Complex-Block"> <p>Wildfire Preparedness (contd.)</p> <ul style="list-style-type: none"> ● Keep fire tools handy ● Use proper building and landscape design <ul style="list-style-type: none"> ■ Create “defensible space” or “safety zone” ■ Use fireproof or fire resistant roofing <p>FEMA CERT Basic Training Unit 1: Fires F-10</p> </div> <p data-bbox="237 705 488 737">Display Slide F-10</p> <div data-bbox="237 1129 315 1199" data-label="Image"> </div> <p data-bbox="237 1268 644 1339">Allow the participants time to respond.</p> <div data-bbox="237 1394 675 1724" data-label="Complex-Block"> <p>During a Wildfire</p> <ul style="list-style-type: none"> ● Listen for emergency information ● Confine pets to one room or arrange for them to stay with a friend or relative ● Move flammable furniture to the center of the home ● Remove flammable drapes and curtains ● Close all doors and windows <p>FEMA CERT Basic Training Unit 1: Fires F-11</p> </div> <p data-bbox="237 1759 509 1791">Display Slide F-11</p>	<ul style="list-style-type: none"> ■ <u>Use proper building and landscape design.</u> Wildland fire experts recommend that flammable vegetation be cleared to a distance of at least 30 feet around the home. This is commonly referred to as a “defensible space” or “safety zone.” Experts also recommend the use of fireproof or fire resistant roofing in areas where wildfires are a hazard. <p data-bbox="716 657 1354 728">Point out that additional strategies for wildfire preparedness include:</p> <ul style="list-style-type: none"> ■ <u>Marking all driveway entrances</u> so that firefighters are aware that the home is there and can find it quickly during a fire. ■ <u>Following all local burning laws.</u> Never burn during dry weather or within 75 feet of a structure or combustibles. <u>Never leave a fire unattended,</u> not even a cigarette. <p data-bbox="716 1035 1507 1066">Explain that, despite best efforts, wildfires will still occur.</p> <p data-bbox="716 1125 1297 1157">What should you do during a wildfire?</p> <p data-bbox="716 1398 1507 1503">Tell the group that there are several measures that they should take inside the home to prevent damage from wildfire.</p> <p data-bbox="716 1545 1378 1577">Describe for the group the following measures:</p> <ul style="list-style-type: none"> ■ <u>Listen for emergency information</u> on radio or television stations or the Emergency Alert System (EAS). If advised to evacuate, do so immediately. Delay increases the risk of being trapped by the fire and can interfere with fire department response. ■ <u>Confine pets</u> to one room or arrange for them to stay with a friend or relative.

**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide F-12</p>	<ul style="list-style-type: none">▪ <u>Move flammable furniture</u> to the center of the home, away from windows and sliding glass doors.▪ <u>Remove flammable drapes and curtains.</u> Close venetian blinds and noncombustible window treatments.▪ <u>Close all doors and windows</u> to reduce air flow. <p>Stress that, if trapped by a wildfire, the participants should try to find a body of water to crouch in. If possible, cover the head and upper body with wet clothing. If a body of water is not accessible, look for shelter in a cleared area or within a rock bed. Breathe the air close to the ground, preferably through a dry cloth.</p> <p>Urge the participants to:</p> <ul style="list-style-type: none">▪ <u>Use caution when reentering</u> the area after a wildfire. Hazards may still exist, including hot spots, which can flare up without warning.▪ <u>Inspect the roof immediately</u> and extinguish sparks or embers that could reignite the fire.▪ <u>Have propane or heating oil tanks inspected</u> by the supplier before using the system. Tanks may shift or fall from their stands or fuel lines may have kinked or weakened. Heat from the fire may have caused the tank to warp or bulge (especially if the tank is not vented).▪ <u>Check the stability of trees around the home.</u> They may have lost stability as a result of fire damage. Also, identify and mark ash pits (created by burned trees and stumps). Falling into a hot ash pit can cause serious burns.▪ <u>If there is no power, check the main breaker.</u> Fires may cause breakers to trip. If the breakers are on and power is still not available, call the utility company.

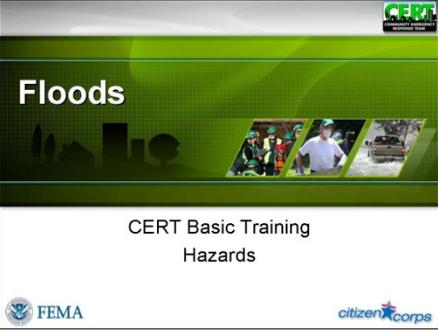
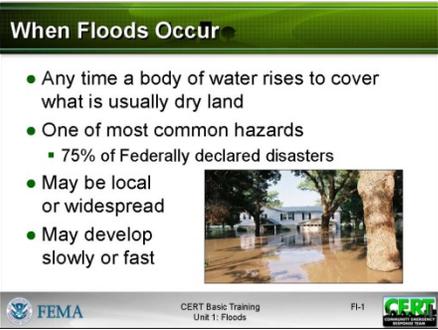
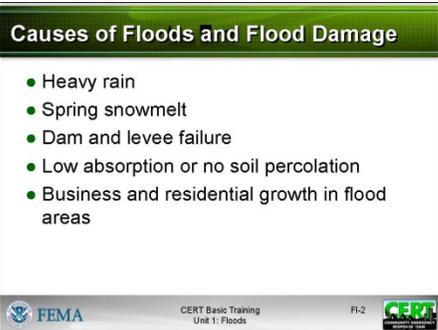
**COMMUNITY EMERGENCY RESPONSE TEAM
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INSTRUCTOR GUIDANCE	CONTENT
<p>Solicit other suggestions from the group.</p> 	<p>Stress the need to take precautions while cleaning the property following a fire by:</p> <ul style="list-style-type: none">▪ <u>Wetting down debris</u> to reduce dust in the air▪ <u>Using an N-95 mask</u> with nose clip.▪ <u>Wear coveralls and leather gloves</u> to protect the hands.▪ <u>Checking with local authorities before disposing of household hazardous materials</u> <p>Does anyone have additional questions, comments, or concerns about fires in the home or wildfires?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
FIRE**

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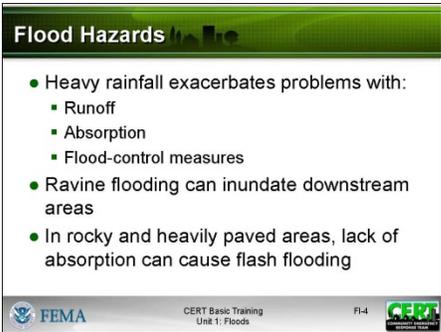
Floods

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 474 678 804"></p> <p data-bbox="240 842 505 873">Display Slide FI-0</p> <p data-bbox="240 915 678 1245"></p> <p data-bbox="240 1278 500 1310">Display Slide FI-1</p> <p data-bbox="240 1383 678 1713"></p> <p data-bbox="240 1751 505 1782">Display Slide FI-2</p>	<p data-bbox="711 453 834 485">Floods</p> <p data-bbox="711 543 1490 684">Introduce this topic by explaining that floods are one of the most common hazards in the United States. A flood occurs any time a body of water rises to cover what is usually dry land.</p> <p data-bbox="711 726 1511 1083">Point out that flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states. While some floods develop slowly, over a period of days; some may develop quickly, and cause flash floods. Floods are the most frequent and costly natural disasters in terms of human hardship and economic loss. According to a 2007 report by the U. S. Geological Survey (USGS), over 75 percent of declared Federal disasters are related to floods.</p> <p data-bbox="711 1356 824 1388">Causes</p> <p data-bbox="711 1394 1349 1425">Floods and flood damage have many causes:</p> <ul data-bbox="711 1446 1503 1640" style="list-style-type: none">▪ <u>Heavy rain</u>, which may occur over several days or as intense rainfall over a short period of time.▪ <u>Spring snowmelt</u> or ice or debris jams that cause a river or stream to overflow its banks and flood the surrounding area.

**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 1142 678 1472" data-label="Image"> </div> <p data-bbox="237 1507 505 1541">Display Slide FI-3</p> <p data-bbox="237 1577 553 1625">http://blog.nola.com/times-picayune/2007/10/large_rain2.jpg</p>	<ul style="list-style-type: none"> <li data-bbox="711 348 1484 491">▪ <u>Dam and levee failure</u>. While dam and levee failure occurs relatively infrequently, it can be a risk especially following prolonged heavy rain, such as occurred throughout the Midwest in 1993 and 2008. <li data-bbox="711 569 1463 852">▪ <u>Low absorption or no soil percolation</u>. As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization increases runoff 2-6 times over what would occur on natural terrain. In areas with rocky geology, rainfall or snowmelt cannot be absorbed. The result can be flash flooding with little or no warning. <li data-bbox="711 873 1507 1052">▪ <u>Business and residential growth in flood areas</u> destroys natural absorption of runoff due to impermeable surfaces. Homes and businesses located on flood plains are at significantly greater risk for serious flood damage. <p data-bbox="711 1108 1446 1178">Each of these causes can be factored to several key elements.</p> <ul style="list-style-type: none"> <li data-bbox="711 1199 1474 1268">▪ <u>Rainfall intensity</u> is the rate of rainfall (in inches per hour). <li data-bbox="711 1289 1243 1318">▪ <u>Duration</u> is how long the rain lasts. <li data-bbox="711 1339 1500 1409">▪ <u>Topography</u> is the overall configuration of the Earth's surface, including natural and manmade features. <li data-bbox="711 1430 1500 1535">▪ <u>Soil conditions</u> include the type of soil, the amount of moisture in the soil, and the amount of soil relative to the amount of rock. <li data-bbox="711 1556 1500 1734">▪ <u>Ground cover</u> includes vegetation as well as manmade covers. Ground that includes larger amounts of vegetation can absorb greater amounts of water. Ground that is paved or has structures on it will result in runoff.

COMMUNITY EMERGENCY RESPONSE TEAM FLOODS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 361 678 693"><p>Flood Hazards</p><ul style="list-style-type: none">● Heavy rainfall exacerbates problems with:<ul style="list-style-type: none">▪ Runoff▪ Absorption▪ Flood-control measures● Ravine flooding can inundate downstream areas● In rocky and heavily paved areas, lack of absorption can cause flash flooding<p>FEMA CERT Basic Training Unit 1: Floods FI-4</p></div> <p data-bbox="237 730 503 766">Display Slide FI-4</p> <div data-bbox="237 1113 678 1444"><p>Flood Risks</p><ul style="list-style-type: none">● Most communities have some risk of flooding● Damage increases with development in:<ul style="list-style-type: none">▪ Coastal areas▪ Floodplains<p>FEMA CERT Basic Training Unit 1: Floods FI-5</p></div> <p data-bbox="237 1480 503 1516">Display Slide FI-5</p> <p data-bbox="237 1549 467 1585">www.nssl.noaa.gov</p> <p data-bbox="237 1617 625 1759">If you live in an area that is susceptible to flooding, add local experiences and prediction data.</p>	<h3 data-bbox="711 331 933 367">Flood Hazards</h3> <p data-bbox="711 388 1510 424">Explain that the reasons floods pose such a risk are that:</p> <ul data-bbox="711 441 1510 688" style="list-style-type: none">▪ Heavy rainfall can exacerbate problems with runoff, absorption, and flood-control measures.▪ Ravine flooding can potentially inundate downstream areas when protection fails.▪ In rocky and heavily paved areas, lack of absorption can cause flash flooding. <p data-bbox="711 808 1502 913">Explain that every major drainage basin in the United States has a floodplain surrounding it. Two areas where inundation is very likely are:</p> <ul data-bbox="711 934 1185 1018" style="list-style-type: none">▪ Along the Mississippi River▪ The central valley of California <p data-bbox="711 1081 1445 1155">Most areas of the United States are subject to some degree of flooding.</p> <p data-bbox="711 1186 1477 1302">Floodplain areas are widespread in the South Atlantic, the Gulf Coast, and the Missouri and Arkansas River basins.</p> <p data-bbox="711 1333 1510 1627">Explain that the costs associated with flooding are increasing as more development occurs in coastal areas and floodplains. Each year, flood losses and damages reach into the billions of dollars. During the 10-year period from 1992 to 2001, floods cost, on average, \$4.1 billion annually. The long-term (30-year) annual average lives lost is 99 per year; most of these fatalities are a result of flash floods.</p>

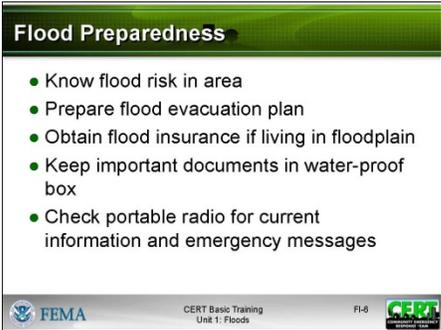
**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Allow the participants time to respond.</p>	<p>In 2005, Hurricane Katrina wreaked havoc on the Gulf states, causing an estimated \$150 billion dollars in damage, and resulting in nearly 2,000 fatalities. Much of this damage occurred after the hurricane during the resulting flood.</p> <p>Point out that floods are measured according to the height that the waters reach. Their magnitude is based on the chances that water levels will equal or exceed a certain point on a recurring basis. Intervals of probability are classified into <u>hazard zones</u>.</p> <p>Flood Awareness</p> <p>What is “rule number one” where flooding is concerned?</p> <p>Stress that “rule number one” is to <u>move quickly to higher ground</u>. Flood waters can carry debris, scour soil and asphalt, and trigger landslides. Even shallow-depth, fast-moving flood waters of 24 inches can produce enough force to carry away a vehicle, and six inches of swiftly moving water can knock someone off his or her feet. <u>Never try to walk, swim, or drive through flood waters!</u></p> <p>How can you keep aware of the potential for flooding or flash flooding?</p>

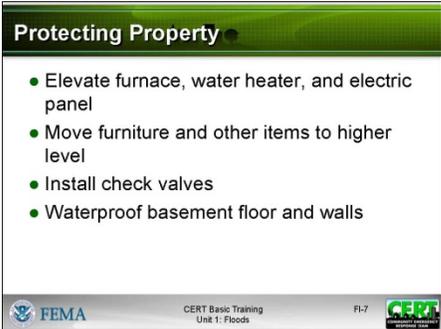
**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
<p>Point out that watches and warnings for flash flooding are different from flood watches and warnings.</p>  <p>Allow the participants time to respond.</p>	<p>Remind participants that the risk of flood will be reported by radio and television, as well as NOAA Weather Radio using EAS (Emergency Alert System), as soon as the National Weather Service (NWS) issues a flood or flash flood <u>watch</u> or <u>warning</u>.</p> <p>What does a flood <u>watch</u> tell you?</p> <p>Explain that flood watches alert the public that <u>flooding is possible</u> within the watch area.</p> <p>Elaborate by telling the group that if they are in a watch area, they should:</p> <ul style="list-style-type: none">▪ Keep informed.▪ Be ready to act if the watch is upgraded to a warning or if they see flooding.
 <p>Allow the participants time to respond.</p>	<p>What does a flood or flash flood <u>warning</u> tell you?</p> <p>Explain that there are two types of flood warnings:</p> <ul style="list-style-type: none">▪ A <u>flood warning</u> is issued when flooding is expected to occur more than 6 hours after heavy precipitation, snowmelt, ice jams, or dam failures, or when a river is expected to exceed flood stage in the next 48 hours.▪ A <u>flash-flood warning</u> is issued when the potential exists for heavy precipitation to create flash flooding in the next 6 – 24 hours.

**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Flood Preparedness</p> <ul style="list-style-type: none">● Know flood risk in area● Prepare flood evacuation plan● Obtain flood insurance if living in floodplain● Keep important documents in water-proof box● Check portable radio for current information and emergency messages <p>FEMA CERT Basic Training Unit 1: Floods FI-6</p> <p>Display Slide FI-6</p>	<p>Tell the group that whether the National Weather Service (NWS) issues a flood warning or a flash-flood warning, persons within the warning area should take precautions <u>immediately!</u> Continue by explaining that both watches and warnings will include protective measures that are recommended by NWS.</p> <p>Flood Preparedness</p> <p>What can you do to prepare for a potential flood?</p> <p>Be sure to stress that it is important to:</p> <ul style="list-style-type: none">▪ <u>Know the flood risk in the area</u>, including the elevation above flood stage and the history of flooding in the area.▪ <u>Prepare a flood evacuation plan</u> and practice the route. Be aware of which roads become flooded and which remain passable. The entire family should know where to go if they have to evacuate.▪ <u>Obtain flood insurance</u> if living in a floodplain (Special Flood Hazard Area). <u>Homeowner's policies do not cover flooding!</u> Check with the city or county government to review the Flood Insurance Rate Maps (FIRMs). Then, check with an insurance agent to obtain coverage under the National Flood Insurance Program (NFIP).▪ <u>Keep important documents in a water-proof box.</u>

**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the group time to respond.</p>  <p>Protecting Property</p> <ul style="list-style-type: none">● Elevate furnace, water heater, and electric panel● Move furniture and other items to higher level● Install check valves● Waterproof basement floor and walls <p>FEMA CERT Basic Training Unit 1: Floods FI-7</p> <p>Display Slide FI-7</p>	<p>Most documents can be replaced, but some are more difficult to replace than others. Protecting them in a water- (and fire-) proof container is the safest plan of action.</p> <ul style="list-style-type: none">▪ <u>Check emergency messages</u> using a portable radio. NWS and local officials update watches and warnings as necessary. Listen often for up-to-date information. <p>How can you protect your property from flood damage?</p> <p>Remind the group that the best way to protect their property from flood damage is to avoid building in a flood plain unless the home is elevated and other flood protection measures are taken. If an existing home is in a floodplain, there are some steps that can help reduce potential damage.</p> <p>Describe for the group the following steps:</p> <ul style="list-style-type: none">▪ <u>Elevate the furnace, water heater, and electric panel</u> to at least one foot above the level of the floodplain (also called the <u>Base Flood Elevation</u>). In some areas, elevating these appliances and utilities may mean relocating them to a higher floor or even to the attic.▪ <u>Move furniture and other items to a higher level.</u> Even if the main floor of the home is flood damaged, moving furniture and other items to a higher level will reduce flood losses.▪ <u>Install check valves</u> in plumbing to prevent flood

**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 764 678 1094" data-label="Image"> </div> <p data-bbox="237 1129 505 1163">Display Slide FI-8</p>	<p data-bbox="756 331 1463 365">water from backing up into the drains of the home.</p> <ul style="list-style-type: none"> <li data-bbox="711 386 1479 457">▪ <u>Waterproof the basement floor and walls</u> to prevent seepage through cracks. <p data-bbox="711 512 1511 693">Remind the group that, in some cases, even these suggestions will not be enough to prevent serious damage from flooding. Urge those who live in floodplains to consult building professionals if they think they need more elaborate mitigation measures (such as elevation).</p> <p data-bbox="711 735 1495 806">Continue by telling the group that if they must evacuate, they should:</p> <ul style="list-style-type: none"> <li data-bbox="711 827 1507 1113">▪ <u>Not walk, swim, or drive through flood waters.</u> Learn and practice driving the local flood evacuation routes. They have been selected because they are safe and provide the best means of escaping flood waters. Flood waters move swiftly and may carry debris that can cause injuries. Remember that 24 inches of water can wash a car away and 6 inches of fast moving water can knock a person off his or her feet. <li data-bbox="711 1134 1503 1239">▪ <u>Stay off bridges over fast-moving water.</u> Fast-moving water can wash bridges away without warning, especially if the water contains heavy debris. <li data-bbox="711 1310 1507 1457">▪ <u>Keep away from waterways.</u> If you are driving and come upon rapidly rising waters, turn around and find another route. Move to higher ground away from rivers, streams, and creeks. <li data-bbox="711 1478 1484 1625">▪ <u>Pay attention to barricades.</u> Local responders place barricades to warn of flooding ahead or to direct traffic safely out of the area. <u>Never</u> drive around barricades. <li data-bbox="711 1793 1468 1869">▪ <u>Avoid storm drains and irrigation ditches.</u> During a flood, storm drains and irrigation ditches fill quickly

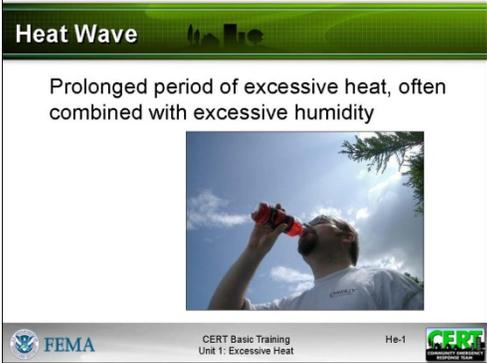
**COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 638 315 709" data-label="Image"> </div> <p data-bbox="237 779 643 848">Allow the participants time to respond.</p> <div data-bbox="237 1104 678 1436" data-label="Complex-Block"> </div> <p data-bbox="237 1472 505 1503">Display Slide FI-9</p>	<p data-bbox="756 331 1446 436">with fast-moving water. Walking in or near storm drains or irrigation ditches is nearly a sure way to drown.</p> <ul data-bbox="711 457 1495 562" style="list-style-type: none"> ▪ <u>Keep family together</u>. As always, family is most important in the event of a flood. Do not lose track of family members. <p data-bbox="711 638 1224 669">What should you do after a flood?</p> <p data-bbox="711 890 1487 1031">Stress that the best thing to do is listen to EAS information to determine whether it is safe to return and if there are special instructions to follow such as boiling water.</p> <p data-bbox="711 1073 1386 1104">Continue with precautions to follow after a flood.</p> <ul data-bbox="711 1125 1503 1850" style="list-style-type: none"> ▪ <u>Stay out of flooded areas</u>. Flooded areas remain unsafe. Entering a flooded area places you—and the individuals who may need to rescue you—at risk. ▪ <u>Reserve the telephone for emergencies only</u>. Telecommunication lines (both land line and cellular) will be busy following a flood. A nonemergency call may prevent an emergency call from getting through. It is best not to use the phone unless it is necessary. ▪ <u>Avoid driving</u>, except in emergencies. Reserve the roads for those who must evacuate and for emergency vehicles. ▪ <u>Wait for authorities</u> to issue a clear message that it is safe to return to evacuated areas.

COMMUNITY EMERGENCY RESPONSE TEAM
FLOODS

INSTRUCTOR GUIDANCE	CONTENT
	<ul style="list-style-type: none">▪ <u>Be aware that snakes and other animals may be in your house in the aftermath of a flood.</u> Look for loose boards and dark spaces, and investigate with care. <p>Do you have additional questions, comments, or concerns about floods or flash floods?</p>

Excessive Heat

INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide He-0</p>  <p>Display Slide He-1</p> <p>http://www.jibble.org/kitecam/images/Cimg0028.jpg</p>	<p>Excessive Heat</p> <p>Introduce excessive heat by defining a heat wave.</p> <p>Explain that a <u>heat wave</u> is a prolonged period of excessive heat, often combined with excessive humidity. Extreme heat is defined as temperatures that hover 10 ° F or more above the average high temperature for the region and last for prolonged periods of time.</p>

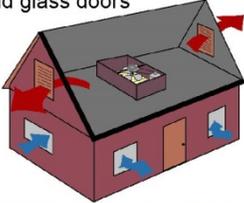
**COMMUNITY EMERGENCY RESPONSE TEAM
EXCESSIVE HEAT**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 331 722 695"> <p>Effects of Excessive Heat</p> <ul style="list-style-type: none"> ● Body must work extra hard to maintain its normal temperature ● Those at risk <ul style="list-style-type: none"> ■ Elderly ■ Very young ■ Disabled ■ Men (perspire more than women) ● People in urban areas at greater risk <p>FEMA CERT Basic Training Unit 1: Excessive Heat He-2</p> </div> <p>Display Slide He-2</p> <div data-bbox="240 1333 722 1696"> <p>Heat Wave Risks</p> <ul style="list-style-type: none"> ● Heat cramps ● Heat exhaustion ● Heat/Sun stroke  <p>FEMA CERT Basic Training Unit 1: Excessive Heat He-3</p> </div> <p>Display Slide He-3</p>	<p>Tell the group that under normal conditions, the body’s internal thermostat produces perspiration that evaporates and cools the body. In abnormal heat and high humidity, however, evaporation is slowed and the body must work extra hard to maintain its normal temperature. The elderly, the very young, and those who are disabled are at risk from extreme heat. Also, because men sweat more than women, they are more likely to have difficulty with extreme heat as a result of dehydration.</p> <p>Continue by explaining that studies indicate that excessive heat that continues for periods longer than 2 days causes a significant rise in heat-related illnesses. Spending several hours each day in air conditioning, however, can reduce the risk of heat-related illness.</p> <p>Explain that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than people living in rural regions. Stagnant atmospheric conditions can trap pollutants in urban areas, and asphalt and concrete stay warm longer. This phenomenon is known as the “urban heat island effect.”</p> <p>Explain that the risks associated with a heat wave can include:</p> <ul style="list-style-type: none"> ■ <u>Heat cramps</u>: Muscular pains and spasms resulting from heavy exertion. Heat cramps are often the first signal that the body is suffering from excessive heat. ■ <u>Heat exhaustion</u>: A form of mild shock that typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating.

COMMUNITY EMERGENCY RESPONSE TEAM
EXCESSIVE HEAT

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the group time to respond.</p> <div data-bbox="237 835 724 1201"><p>During a Heat Wave</p><ul style="list-style-type: none">• Seek air conditioning• Avoid strenuous activities during heat of day• Wear lightweight, light-colored clothing• Check on family members and neighbors• Drink plenty of fluids• Take frequent breaks<p>FEMA CERT Basic Training Unit 1: Excessive Heat He-4</p></div> <p>Display Slide He-4</p>	<ul style="list-style-type: none">▪ <u>Heat/Sun stroke</u>: A life-threatening condition in which the victim's temperature control system that produces sweating to cool the body stops working. The body temperature can rise to the extent that brain damage and death may result if the body is not cooled quickly. <p>What can you do during a heat wave?</p> <p>Summarize the discussion using the points from the slide.</p> <ul style="list-style-type: none">▪ <u>Seek air conditioning</u>. If the home does not have air conditioning, persons should seek areas that do. Schools, libraries, shopping malls, community centers, and many other public places offer good refuges during extreme heat.▪ <u>Avoid strenuous activities</u> during the hottest period of the day. Heat-related illnesses can strike quickly, especially for those who perform strenuous work during the heat of the day.▪ <u>Wear lightweight, light-colored clothing</u>. Light colors reflect the sun's rays better than dark colors, which absorb the heat. Protect the face and head by wearing a wide-brimmed hat.▪ <u>Check on family members and neighbors</u> who do not have air conditioning or who have medical problems that make them particularly susceptible to heat-related illnesses.

COMMUNITY EMERGENCY RESPONSE TEAM
EXCESSIVE HEAT

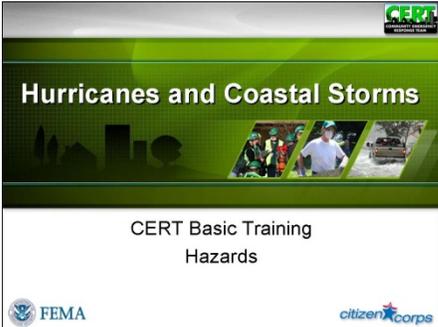
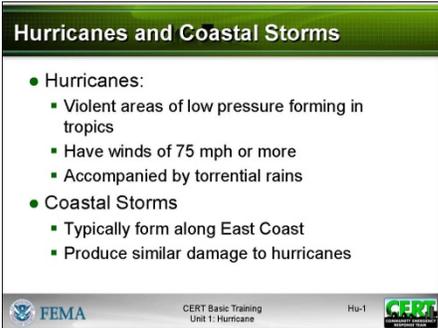
INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="237 821 315 890"></p> <p data-bbox="237 909 695 940">Allow the group time to respond.</p> <div data-bbox="237 997 724 1360"><p data-bbox="250 1016 483 1045">Preparing the Home</p><ul data-bbox="266 1073 602 1157" style="list-style-type: none">● Install additional insulation● Protect windows and glass doors● Use attic fans<p data-bbox="250 1329 716 1360">FEMA CERT Basic Training Unit 1: Excessive Heat He-5</p></div> <p data-bbox="237 1402 516 1434">Display Slide He-5</p> <p data-bbox="237 1472 732 1518">http://dnr.louisiana.gov/sec/execdiv/techasmt/ecep/home/g/hm-g4b.gif</p> <p data-bbox="237 1577 412 1608">PM, P. He-3</p> <p data-bbox="237 1766 315 1835"></p>	<ul data-bbox="755 352 1511 741" style="list-style-type: none">▪ <u>Drink plenty of fluids.</u> Dehydration can occur quickly and can be unnoticed or mistaken for other illnesses. Increasing fluid intake, even if not thirsty, can reduce the risk of dehydration. Caution the group, however, that persons who are on fluid-restrictive diets (e.g., those with kidney disease) should consult their doctors before increasing fluid intake.▪ <u>Take frequent breaks.</u> Taking frequent breaks and seeking shade allows the body to cool down. <p data-bbox="755 821 1511 888">What can you do to make your home cooler, even if you don't have air conditioning?</p> <p data-bbox="755 1003 1422 1066">Suggest the measures below to protect against excessive heat in the home:</p> <ul data-bbox="755 1094 1511 1413" style="list-style-type: none">▪ <u>Install additional insulation.</u> Insulation helps to keep heat out in the summer as well as to keep heat in during the winter months.▪ <u>Protect windows and glass doors.</u> Consider keeping storm windows installed throughout the year.▪ <u>Use attic fans.</u> Because heat rises, attic fans can help clear the hottest air from the home. <p data-bbox="755 1560 1487 1703">Refer the group to <i>Excessive Heat Myths and Facts</i> in the Participant Manual. Suggest that the participants review these myths and facts after the session.</p> <p data-bbox="755 1766 1463 1833">Do you have any additional questions, comments, or concerns about excessive heat?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
EXCESSIVE HEAT**

PM, P.	Excessive Heat Myths and Facts
MYTH:	Stay in the home during a heat wave.
FACT:	Air conditioning in homes and other buildings markedly reduces danger from the heat. If you must stay in a home where air conditioning is not available, stay on the lowest floor, out of the sunshine. If possible, however, choose other places to get relief from the heat during the hottest part of the day.
MYTH:	Beer and alcoholic beverages are best to satisfy thirst in extreme heat.
FACT:	Although beer and alcohol appear to satisfy thirst, they actually cause additional dehydration. Unless you are on a fluid-restricted diet, drink water during a heat wave, even if you don't feel thirsty.
MYTH:	During extreme heat, the best time to exercise is during the late morning and early afternoon.
FACT:	Many heat emergencies occur in those who exercise or work during the hottest part of the day. Reduce, eliminate, or reschedule strenuous activities. If you must do strenuous activity, do it during the coolest part of the day, which is usually in the morning between 4 a.m. and 7 a.m.
MYTH:	A sunstroke is not life-threatening.
FACT:	A heat stroke or sunstroke <u>is</u> life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.
MYTH:	You can only get a sunburn on really hot days.
FACT:	Sunburn (and tanning) result from exposure to ultraviolet (UV) radiation, which is distinct from the light and heat emitted by the sun. You cannot see or feel UV rays, but they can be quite damaging. UV exposure has been linked to skin cancer and other skin disorders, cataracts and other eye damage, and immune system suppression. UV exposure is a year-round issue, and clouds provide only partial protection.

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Hurricanes and Coastal Storms

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 468 675 795"><p>CERT Basic Training Hazards</p><p>FEMA citizencorps</p></div> <p data-bbox="237 835 513 867">Display Slide Hu-0</p> <div data-bbox="237 911 315 982"></div> <p data-bbox="237 1020 656 1121">Allow the participants time to respond before displaying the slide.</p> <div data-bbox="237 1163 675 1491"><p>Hurricanes and Coastal Storms</p><ul style="list-style-type: none">● Hurricanes:<ul style="list-style-type: none">■ Violent areas of low pressure forming in tropics■ Have winds of 75 mph or more■ Accompanied by torrential rains● Coastal Storms<ul style="list-style-type: none">■ Typically form along East Coast■ Produce similar damage to hurricanes<p>FEMA CERT Basic Training Unit 1: Hurricane Hu-1 CERT</p></div> <p data-bbox="237 1535 513 1566">Display Slide Hu-1</p>	<p data-bbox="708 478 1260 510"><i>Hurricanes and Coastal Storms</i></p> <p data-bbox="708 911 1446 972">What is the difference between a hurricane and a coastal storm?</p> <p data-bbox="708 1167 870 1199">Hurricanes</p> <p data-bbox="708 1241 1500 1491">A hurricane is a violent area of low pressure forming in the tropical Atlantic Ocean from June to November. August and September are peak months. (Similar Western Pacific Ocean storms are called <u>typhoons</u>.) Hurricanes have winds of 75 miles per hour or more and are accompanied by torrential rains and – along coastal areas – a <u>storm surge</u>.</p> <p data-bbox="708 1535 1500 1749">Tell the participants that, although coastal storms may have hurricane-force winds and may cause similar kinds and amounts of damage, they are not classified as hurricanes because they do not originate in the tropics. Coastal storms typically form along the east coast from December through March.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS**

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 401 675 443">Hurricane and Coastal Storm Risks</p> <ul data-bbox="256 453 592 682" style="list-style-type: none">● Strong winds and storm surge can:<ul style="list-style-type: none">▪ Damage or destroy structures▪ Lift and move unstable structures and objects▪ Damage utility and sewage lines▪ Give rise to tornadoes▪ Make roads impassable▪ Disrupt communication lines▪ Cause coastal erosion▪ Cause floods▪ Threaten lives  <p data-bbox="240 688 675 724">FEMA CERT Basic Training Unit 1: Hurricane Hu-2</p> <p data-bbox="240 762 516 804">Display Slide Hu-2</p> <p data-bbox="240 1245 675 1287">Saffir-Simpson Scale</p> <ul data-bbox="256 1297 479 1480" style="list-style-type: none">● Measures wind speed● Has five categories<ul style="list-style-type: none">▪ I: 74-95 mph▪ II: 96-110 mph▪ III: 111-130 mph▪ IV: 131-155 mph▪ V: More than 155 mph <p data-bbox="240 1528 675 1564">FEMA CERT Basic Training Unit 1: Hurricane Hu-3</p> <p data-bbox="240 1602 516 1644">Display Slide Hu-3</p> <p data-bbox="240 1707 414 1749">PM, P. Hu-2</p>	<p data-bbox="706 363 1242 405">Hurricane and Coastal Storm Risks</p> <p data-bbox="706 436 1469 510">Explain that hurricanes and coastal storms pose a risk because powerful winds and storm surges can:</p> <ul data-bbox="706 531 1396 1035" style="list-style-type: none">▪ Damage or destroy structures▪ Lift and move unstable structures and objects▪ Damage utility and sewage lines▪ Give rise to tornadoes▪ Cause coastal erosion▪ Cause floods▪ Threaten lives▪ Make roads impassable▪ Disrupt communication lines, including 911▪ Overwhelm first responders <p data-bbox="706 1056 1510 1161">The accompanying heavy rains can inundate coastal areas and inland communities, presenting another risk to life and property.</p> <p data-bbox="706 1203 1185 1245">Saffir-Simpson Hurricane Scale</p> <p data-bbox="706 1276 1502 1413">Refer the participants to the chart titled <i>Hurricane Classifications</i> in the Participant Manual. Explain that hurricanes are classified according to the Saffir-Simpson Hurricane Scale, which measures wind speed.</p> <p data-bbox="706 1455 1485 1560">Point out that the chart in the Participant Manual also includes the anticipated barometric pressure (in inches) and storm surge for each category of storm.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS**

PM, P. Hu-2	Hurricane Classifications
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Category	Barometric Pressure (Inches)	Windspeed (Miles Per Hour)	Storm Surge (Feet)
I - Minimal	Above 28.94	74-95	4-5
II - Moderate	28.50-28.91	96-110	6-8
III - Extensive	27.91-28.47	111-130	9-12
IV - Extreme	27.17-27.88	131-155	13-18
V - Catastrophic	Less Than 27.17	More Than 155	More than 18

**COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS**

INSTRUCTOR GUIDANCE	CONTENT
	<p>Frequency of Hurricanes</p> <p>Point out that the <u>greatest</u> likelihood of a hurricane striking land is along the Gulf Coast and the southeastern seaboard. However, hurricanes also have hit central Pennsylvania and the coasts of New Jersey, New York, and New England.</p> <p>Explain that each year an average of 11 storm-strength weather disturbances develop over the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico. Of these, half may grow to hurricane proportion. Two hurricanes are likely to strike the U.S. coast each year.</p> <p>Statistics</p>
<p>Statistics</p> <ul style="list-style-type: none"> ● 100 million Americans are at risk for hurricanes ● Almost 14 million live in an area where winds greater than 125 mph have been recorded (i.e., tip of Florida to North Carolina coast) ● More than 6 million live in storm surge areas 	<p>Stress that nearly 100 million Americans are at risk from hurricanes. Specifically:</p> <ul style="list-style-type: none"> ■ Almost 14 million live in the area where winds greater than 125 mph have been recorded (i.e., the tip of Florida to the North Carolina coast). ■ More than 6 million live in storm surge areas.
<p> <small>CERT Basic Training Unit 4: Hurricane</small></p> <p>Display Slide Hu-4</p> <p></p> <p>Allow the group time to respond.</p>	<p>Emphasize that, although deaths from hurricanes are decreasing as hurricane warning systems improve, property damage is on the rise.</p> <p>Preparing for a Hurricane or Coastal Storm</p> <p>How can you prepare for a hurricane or coastal storm?</p>

COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p>Preparing for a Hurricane</p> <ul style="list-style-type: none">● Know risk and evacuation routes● Develop action plan● Secure needed supplies● Floodproof property● Create personal disaster supply kit your family● Secure mobile homes <p> CERT Basic Training Unit 1: Hurricane</p>	<p>Point out that many people do not realize the threat that hurricanes can present – even if they live in hurricane-prone areas – because they have not experienced a major hurricane.</p> <p>Stress that there are certain preparations that people who live in high-risk areas should take to prepare for a hurricane or coastal storm <u>before</u> one occurs.</p> <p>Describe for the group the following preparations:</p> <ul style="list-style-type: none">▪ <u>Know the risk and evacuation routes.</u> Being aware of the risk and how to get out of the area as quickly as possible should an evacuation order be issued is one of the key preparedness steps to take. Driving the evacuation routes to ensure familiarity before a storm and identifying shelter locations will make an evacuation smoother.▪ <u>Develop an action plan.</u> When will you begin preparing your home for possible high winds and storm surge? How much time will it take you to evacuate, if necessary? Does your evacuation route change based on the direction of the storm? Will you go to a shelter or a hotel? These are all questions that anyone who lives in a high-risk area should answer as part of hurricane or coastal storm planning. While creating this plan, keep in mind any provisions that might be necessary to accommodate the elderly, those with special needs, and pets.▪ <u>Secure needed supplies.</u> If you assemble your disaster supply kits as suggested in this unit, you will have everything that you need for hurricane and coastal storm preparedness.

Display Slide Hu-5

COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p>Before a Hurricane</p> <ul style="list-style-type: none">● Board up all windows and glass doors● Check batteries● Stock up on nonperishable food● Listen to EAS <p>FEMA CERT Basic Training Unit 1: Hurricane</p>	<p>Before a Hurricane</p> <p>Summarize for the group the steps that everyone who is at risk should take before a hurricane strikes:</p> <ul style="list-style-type: none">▪ <u>Board up all windows and glass doors.</u> Studies have shown that if the wind can be kept out of a structure, the structure will withstand high winds relatively well. If wind is allowed inside, however, additional structural and nonstructural damage will occur very quickly. The best way to prevent wind from getting into a structure is to cover all windows and glass doors with plywood or to close hurricane shutters. Have tarps available for temporary roof repairs.▪ <u>Check batteries.</u> Often electricity is disrupted by hurricanes (and coastal storms) and, depending on the extent of damage, may not be restored immediately. Check batteries for flashlights and portable radios to ensure that they are fresh. Replace old batteries, and have extra on hand.▪ <u>Stock up on nonperishable food.</u> A 3-day supply of food and water for each family member is a must.▪ <u>Listen to the Emergency Alert System (EAS)</u> for local emergency information. Local officials will have the most current emergency information about the storm (including watch and warning information from the National Weather Service) and will provide information and instructions via EAS.

Display Slide Hu-6

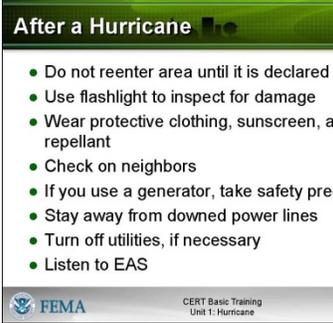
COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p>Stay or Go?</p> <ul style="list-style-type: none">● If in evacuation zone, leave immediately<ul style="list-style-type: none">■ Determine where you will go■ Leave as early as possible● If not in evacuation zone:<ul style="list-style-type: none">■ Follow sheltering guidelines■ Determine safe room in home■ Fortify house■ Assist those with special needs <p> CERT Basic Training Unit 1: Hurricane</p>	<h3>Deciding to Stay or Go</h3> <p>If you are in an evacuation zone, LEAVE IMMEDIATELY. As CERT members, you set the example for your community.</p> <p>If you are evacuating:</p> <ul style="list-style-type: none">■ <u>Determine where you will go.</u> Identify a family member's or friend's house, or a public shelter, where you will go if you evacuate. Keep in mind those with special needs, including the elderly, and pets. Preregistration and approval at shelters is often required. Check with the shelter to determine what supplies you should bring.■ <u>Leave as early as possible.</u> <p>If you are NOT in an evacuation zone and decide to stay:</p> <ul style="list-style-type: none">■ <u>Follow the sheltering guidelines.</u>■ <u>Determine a safe room in your home.</u>■ <u>Fortify your house.</u> Consult www.flash.org for information on window protection, garage door protection, roof protection, and door protection. Secure outdoor items that could be blown away and cause damage.■ <u>Assist those with special needs.</u> A wheelchair dependent person who lives in a high rise, for instance, might be "shut-in" if the electricity goes out and the building's elevator is inoperable. He/she will require food, water, and possibly medicine. <h3>What should you do <u>during</u> a hurricane?</h3>
<p>Display Slide Hu-7</p> <p></p> <p>Allow the group to respond before displaying the next slide.</p>	

COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p>During a Hurricane</p> <ul style="list-style-type: none">● Stay indoors● Stay away from flood waters● Be aware of the “eye”● Be alert for tornadoes <p> CERT Basic Training Unit 1: Hurricane</p>	<p>During a Hurricane</p> <p>Allow the group time to respond. Then, summarize their responses using the slide.</p> <p>Be sure to make these points:</p> <ul style="list-style-type: none">▪ <u>Stay indoors.</u> If advised to evacuate, do so. However, do not assume that because an evacuation order is not issued that the situation is safe. Even Category 1 hurricanes are dangerous. Stay indoors and listen to EAS for up-to-date information.▪ If advised to take shelter:<ul style="list-style-type: none">• Take the family disaster supply kit.• Go to an interior “safe” room without windows, if possible.• Stay in the safe room and listen to EAS for additional instructions.▪ <u>Stay away from flood waters.</u> If the home begins to flood, go to a higher level, if possible.▪ <u>Be aware of the “eye.”</u> The “eye” of a hurricane is typically 20 to 30 miles wide in relation to the storm, which may have a diameter of 400 miles. During the “eye,” there are very few clouds, but it is important to remember that the storm is not over.▪ <u>Be alert for tornadoes.</u> Tornadoes are frequently associated with hurricanes, and are most common in the right-front quadrant of the storm.
<p>Display Slide Hu-8</p> <p>If you live in an area that is away from the coast but subject to inland flooding, you should include some discussion on inland flooding that accompanies decaying hurricanes and tropical storms and the risk of cascading events, such as landslides and mudflows. You should also emphasize that hurricane- and tropical storm-force winds can extend well inland from the coast, and that the strongest sustained winds from a hurricane usually occur in the right front quadrant of the storm.</p>	

**COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the group to respond before displaying the next slide.</p>	<p>What precautions should you take <u>after</u> a hurricane or coastal storm?</p>
 <p>After a Hurricane</p> <ul style="list-style-type: none"> • Do not reenter area until it is declared safe • Use flashlight to inspect for damage • Wear protective clothing, sunscreen, and repellent • Check on neighbors • If you use a generator, take safety precautions • Stay away from downed power lines • Turn off utilities, if necessary • Listen to EAS <p>FEMA CERT Basic Training Unit 1: Hurricane</p>	<p>After a Hurricane</p> <p>Be sure to make these points:</p> <ul style="list-style-type: none"> ▪ <u>Do not reenter the area until it is declared safe.</u> Reentry to the area too soon may cause unnecessary risk—and may keep first responders and utility workers from doing their jobs. ▪ <u>Use a flashlight to inspect for damage.</u> Do not assume that utilities are undamaged following a hurricane or coastal storm. Checking for damage with a flashlight reduces the risk of injury, especially from a damaged electric supply. ▪ <u>Wear protective clothing, sunscreen, and bug repellent.</u> ▪ <u>Be aware that lost pets may be scared and more inclined to bite.</u> ▪ <u>Be aware of traffic hazards.</u> Do not drive through flooded areas. Watch for traffic signals that may be out of service. ▪ <u>Check on neighbors.</u> ▪ <u>If you use a generator, take safety precautions.</u> Follow proper directions for use and never use a generator indoors, including garages. Keep the generator at least 10 feet from any opening of anyone’s home or business. Consult your local fire marshal for more information. ▪ <u>Stay away from downed power lines.</u> The only sure way to limit risk from downed power lines is to avoid them completely.
<p>Display Slide Hu-9</p>	

**COMMUNITY EMERGENCY RESPONSE TEAM
HURRICANES AND COASTAL STORMS**

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Landslides and Mudflows

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 470 675 800"></p> <p data-bbox="240 835 493 867">Display Slide L-0</p> <p data-bbox="240 911 315 982"></p> <p data-bbox="240 1020 643 1087">Allow the participants time to respond.</p> <p data-bbox="240 1129 675 1459"></p> <p data-bbox="240 1493 493 1524">Display Slide L-1</p> <p data-bbox="240 1562 643 1608">Mill Creek landslide. CALTRANS Photo by Lynn Harrison, 1997</p>	<p data-bbox="708 449 1159 485"><i>Landslides and Mudflows</i></p> <p data-bbox="708 543 1203 575">Introduce landslides and mudflows.</p> <p data-bbox="708 911 1360 942">What is a landslide and what causes them?</p> <p data-bbox="708 1129 1511 1346">Explain that a <u>landslide</u> is a rapid shift in land mass that is typically associated with periods of heavy rainfall or rapid snowmelt. Landslides tend to worsen the effects of flooding that often accompanies them. In areas that have been burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.</p> <p data-bbox="708 1388 1468 1528">Tell the group that while some landslides move slowly and cause damage gradually, others move so rapidly that they can destroy property and take lives suddenly and unexpectedly.</p>

COMMUNITY EMERGENCY RESPONSE TEAM
LANDSLIDES AND MUDFLOWS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 331 673 661"><p>Areas Prone to Landslides</p><ul style="list-style-type: none">• Existing old landslides• Bases of steep slopes• Bases of drainage channels• Developed hillsides where leach-field septic systems are used<p>FEMA CERT Basic Training Unit 1: Landslides L-2</p></div> <p data-bbox="240 693 495 724">Display Slide L-2</p> <div data-bbox="240 1281 316 1354"></div> <p data-bbox="240 1386 560 1459">Allow the group time to respond.</p>	<p data-bbox="706 331 1502 399">Point out that areas that are generally prone to landslide hazards include:</p> <ul data-bbox="706 420 1502 651" style="list-style-type: none">▪ Existing old landslides▪ The bases of steep slopes▪ The bases of drainage channels▪ Developed hillsides where leach-field septic systems are used <p data-bbox="706 672 1510 882">Tell the group that debris flows — sometimes referred to as mudslides, mudflows, lahars, or debris avalanches — are common types of fast-moving landslides. They usually start on steep hillsides as shallow landslides that accelerate to speeds that are typically about 10 miles per hour, but can exceed 35 miles per hour.</p> <p data-bbox="706 924 1510 1102">Point out that the consistency of debris flows range from watery mud to thick, rocky mud that can carry away items such as boulders, trees, and cars. When the flows reach flatter ground, the debris spreads over a broad area.</p> <p data-bbox="706 1144 1469 1218">Explain that the most destructive types of debris flows are those that accompany volcanic eruptions.</p> <p data-bbox="706 1270 1485 1354">What can you do to increase your awareness of the landslide risk in your area?</p>

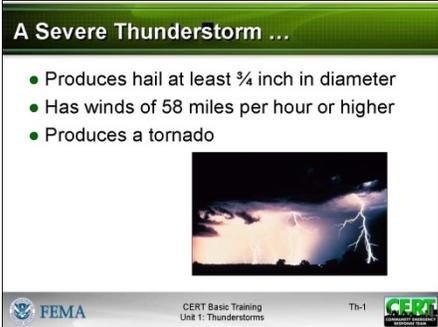
**COMMUNITY EMERGENCY RESPONSE TEAM
LANDSLIDES AND MUDFLOWS**

INSTRUCTOR GUIDANCE	CONTENT
	<p>Suggest that one of the most important steps that they can take is to become familiar with the landslide history in the area. They are at lower risk if they are in areas that:</p> <ul style="list-style-type: none">▪ Have not moved in the past▪ Are relatively flat and away from sudden changes in slope▪ Are along ridge lines but set back from the tops of slopes <p>Urge the participants to look for patterns of storm-water drainage on slopes around their homes, noting especially:</p> <ul style="list-style-type: none">▪ Places where runoff water converges, increasing the flow over soil-covered slopes▪ Signs of land movement, such as small landslides, debris flows, or progressively tilting trees <p>Suggest that, if the participants see signs that indicate a risk of landslide, they seek a professional site analysis and assistance with mitigation measures.</p> <p>Does anyone have additional questions, or comments, or concerns about landslides or mudflows?</p>

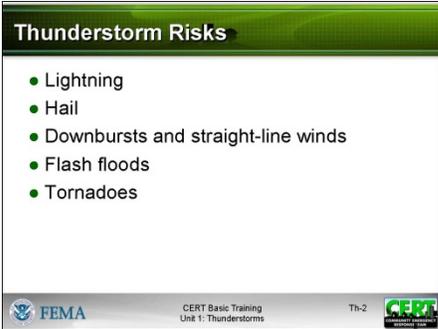


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Severe Thunderstorms

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 468 675 793"><p>Severe Thunderstorms</p><p>CERT Basic Training Hazards</p><p>FEMA citizen*corps</p></div> <p data-bbox="237 831 513 867">Display Slide Th-0</p> <div data-bbox="237 903 675 1230"><p>A Severe Thunderstorm ...</p><ul style="list-style-type: none">● Produces hail at least ¾ inch in diameter● Has winds of 58 miles per hour or higher● Produces a tornado<p>FEMA CERT Basic Training Unit 1: Thunderstorms Th-1</p></div> <p data-bbox="237 1268 513 1304">Display Slide Th-1</p> <p data-bbox="237 1339 675 1413">http://earthobservatory.nasa.gov/Newsroom/NasaNews/ReleaseImages/20050111/02_thunderstorm_night.jpg</p>	<p data-bbox="706 478 1112 514">Severe Thunderstorms</p> <p data-bbox="706 569 1495 674">Explain that, while all thunderstorms are dangerous, the National Weather Service (NWS) defines a <u>severe thunderstorm</u> as one that:</p> <ul data-bbox="706 695 1453 867" style="list-style-type: none">▪ Produces hail at least three-quarters of an inch in diameter.▪ Has winds of 58 miles per hour or greater.▪ Produces a tornado. <p data-bbox="706 888 1485 1031">Tell the group that thunderstorms may occur singly, in clusters, or in lines. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time.</p>

COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 359 675 688"><p>Thunderstorm Risks</p><ul style="list-style-type: none">● Lightning● Hail● Downbursts and straight-line winds● Flash floods● Tornadoes<p>FEMA CERT Basic Training Unit 1: Thunderstorms Th-2</p></div> <p data-bbox="237 722 513 758">Display Slide Th-2</p> <p data-bbox="237 793 643 863">Lightning will be covered in more detail in a few minutes.</p> <div data-bbox="237 1451 315 1524"></div> <p data-bbox="237 1556 643 1625">Allow the participants time to respond.</p>	<p data-bbox="704 359 1333 428">Explain that the risks associated with severe thunderstorms include:</p> <ul data-bbox="704 449 1495 1205" style="list-style-type: none">▪ <u>Lightning</u>. Although most victims of lightning strikes do survive, 75 to 100 people in the United States are killed each year by lightning—more than are killed each year by tornadoes. Lightning also causes an estimated 5 billion dollars in economic losses each year in the United States.▪ <u>Hail</u>. Hail can be smaller than a tear or as large as a softball and can cause destruction to automobiles, glass surfaces, roofs, plants, and crops. Pets and livestock are particularly vulnerable to hail.▪ <u>Downbursts and straight-line winds</u>. Thunderstorms can produce winds as high as 150 miles per hour, strong enough to flip cars, vans, and trucks. These winds can have disastrous effects on air travel.▪ <u>Flash floods</u>. Heavy rain from thunderstorms can cause flash flooding. Flash floods are the number one cause of death associated with thunderstorms.▪ <u>Tornadoes</u>. Some thunderstorms may spawn tornadoes. <p data-bbox="704 1262 1495 1409">Remind the group that the National Weather Service (NWS) Storm Prediction Center issues watches and warnings of hazardous weather, including severe thunderstorms. Keep your NOAA Weather Radio handy!</p> <p data-bbox="704 1444 1455 1556">What is the difference between a Severe Thunderstorm Watch and a Severe Thunderstorm Warning?</p>

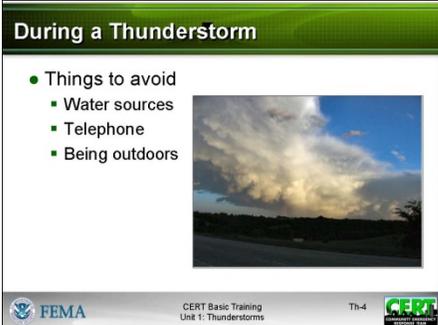
**COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS**

INSTRUCTOR GUIDANCE	CONTENT
<p>Because different communities have different warning systems, take time at this point to discuss how your community issues severe thunderstorm warnings.</p> <p>Explain the NWS “30/30” lightning rule. If the time delay between seeing lightning and hearing thunder is less than 30 seconds, there is a risk of a lightning strike. Stay indoors for 30 minutes after hearing the last clap of thunder.</p>  <p>Allow the participants time to respond.</p>	<p>Explain that:</p> <ul style="list-style-type: none">▪ A <u>watch</u> is issued when severe thunderstorms are possible in and near the watch area. Citizens should be alert for approaching storms.▪ A <u>warning</u> is issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm. <p>Lightning</p> <p>Stress that lightning often strikes outside areas of heavy rain and can occur as far as 10 miles away from any rainfall.</p> <p>Emphasize that the participants <u>are in danger from lightning if they can hear thunder</u>. In fact, more than 50 percent of lightning deaths occur <u>after</u> the thunderstorm has passed.</p> <p>How can you prepare for severe thunderstorms?</p>

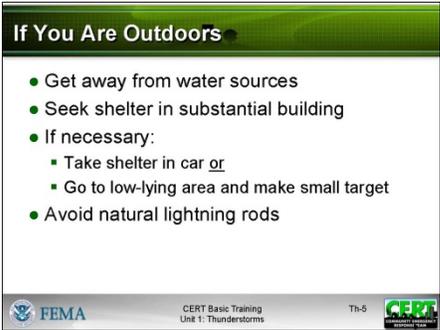
**COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 472 675 800" data-label="Image"></div> <p data-bbox="237 835 513 869">Display Slide Th-3</p>	<p data-bbox="704 363 1463 432">Stress that there <u>is</u> a need to prepare for severe thunderstorms and there <u>are</u> steps that they can take.</p> <p data-bbox="704 472 1451 506">Emphasize key steps in thunderstorm preparedness:</p> <ul data-bbox="704 527 1511 1031" style="list-style-type: none"><li data-bbox="704 527 1511 705">▪ <u>Understand the risk.</u> Severe thunderstorms can occur year-round and at any hour. Take time to learn about the severe thunderstorm risk in your area—including whether and how often severe thunderstorms are accompanied by tornadoes.<li data-bbox="704 726 1511 831">▪ <u>Learn to make a small target.</u> Practice squatting low to the ground, making the smallest target possible while minimizing contact with the ground.<li data-bbox="704 852 1511 1031">▪ <u>Pay attention to warnings.</u> Use a NOAA Weather Radio with a tone-alert feature or listen to local radio or television for Emergency Alert System (EAS) broadcasts. Learn the community’s warning system and <u>never ignore warnings.</u> <p data-bbox="704 1087 1487 1192">Suggest that participants also take measures to protect their property, including those measures that are required for high wind:</p> <ul data-bbox="704 1213 1511 1682" style="list-style-type: none"><li data-bbox="704 1213 1511 1283">▪ <u>Check for hazards in your yard.</u> Be aware of potential lightening rods – swing sets, trees, etc.<li data-bbox="704 1304 1511 1409">▪ <u>Bring outdoor furniture inside</u> or otherwise secure it to keep it from blowing. Small objects can become deadly projectiles in a high wind.<li data-bbox="704 1461 1511 1682">▪ <u>Remove dead or overhanging limbs</u> from trees and shrubbery. Strategically remove branches to allow the wind to pass through. Strong winds can break weak limbs and carry them at high speed, causing damage to property or injury to humans and animals. And lightning can and will strike the weakest part of a tree.

**COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS**

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="237 604 315 674"></p> <p data-bbox="237 709 643 779">Allow the participants time to respond.</p> <div data-bbox="237 930 675 1255"></div> <p data-bbox="237 1293 513 1329">Display Slide Th-4</p> <p data-bbox="237 1367 667 1430">www.crh.noaa.gov/.../thunderstorm2.jpg</p>	<p data-bbox="703 363 1507 541">If the community is at high risk for severe thunderstorms, or if sections of the community are particularly vulnerable, suggest that participants living in those areas purchase and install lightning rods. Lightning detectors can also help protect you.</p> <p data-bbox="703 600 1300 667">What should you <u>avoid</u> during a severe thunderstorm?</p> <p data-bbox="703 821 1507 888">Summarize the discussion using the information from the slide.</p> <p data-bbox="703 936 1398 1003">Be sure to stress that, during a thunderstorm, the participants should avoid:</p> <ul data-bbox="703 1020 1507 1451" style="list-style-type: none"><li data-bbox="703 1020 1507 1167">▪ <u>Water sources</u>. If boating or swimming, get to land immediately. Stay away from bodies of water and wet sand. If indoors, stay away from running water. Electricity from lightning can travel through plumbing.<li data-bbox="703 1184 1507 1331">▪ <u>The telephone</u>. Electricity from lightning can also travel through phone lines. Note that cell phones are considered safe to use indoors, though there is some risk when used outdoors during a storm.<li data-bbox="703 1348 1507 1451">▪ <u>The outdoors</u>. A sturdy building is the safest place to be during a severe thunderstorm. Avoid unprotected areas and unprotected shelters in open areas. <p data-bbox="703 1472 1507 1682">Suggest that participants turn off air conditioning and appliances. Electricity from lightning can enter a room through appliances. Also, turning off and unplugging appliances can eliminate the risk of damage from surges that accompany lightning strikes in close proximity to the home.</p>

COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Display Slide Th-5</p>	<p>What should you do if you get caught outside during a severe thunderstorm?</p> <p>Summarize the discussion by making the points shown in the slide.</p> <p>Reinforce that, if caught outdoors in a severe thunderstorm, the participants should:</p> <ul style="list-style-type: none">▪ <u>Avoid water sources.</u> Get out of pools or lakes. Get off the beach.▪ <u>Seek shelter</u> in a substantial, permanent, enclosed structure. <u>Avoid unprotected shelters, such as golf carts and baseball dugouts.</u> Remember that isolated shelters in otherwise open areas are a target for lightning. Temporary shelters, such as gazebos, are subject to being blown in a strong wind and offer little protection from hail.▪ If there are no permanent shelters within reach, <u>take shelter in a car.</u> Keep all windows closed and do not touch anything that is metal. If in the woods, find an area that is <u>protected by low trees</u> (not a single tall tree in the open). As a last resort, go to a low-lying area, away from trees, poles, and metal objects. (Avoid areas that are subject to flooding.) Squat low to the ground, and place your hands on your knees with your head between them. Make as small a target as possible. <u>Do not lie flat on the ground.</u>▪ <u>Avoid natural lightning rods,</u> such as golf clubs, tractors, fishing rods, and camping equipment. Lightning is <u>attracted</u> to all of these items.

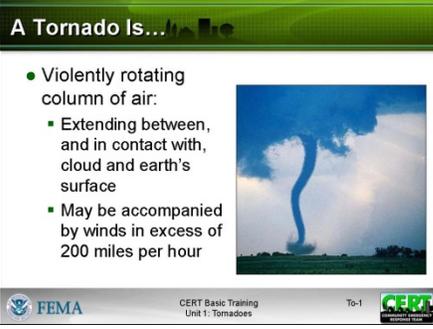
COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>	<p>What should you do if you're driving in a severe thunderstorm?</p> <p>Be sure to include the following points in the discussion:</p> <ul style="list-style-type: none">▪ <u>Pulling safely to the side of the road</u>, keeping a good distance from trees or other tall objects that could fall on the vehicle, and ensuring that the emergency flashers are on.▪ <u>Avoiding contact with metal surfaces</u> inside the vehicle.▪ <u>Avoiding flooded roadways</u>. Most flood fatalities are caused by people attempting to drive through high water. The depth of water is not always obvious. The roadbed may be washed out or rapidly rising water could stall the engine or engulf the vehicle.
 <p>Allow the participants time to respond.</p>	<p>What should you be careful with following a thunderstorm?</p> <p>Be sure to cover the points below in the discussion:</p> <ul style="list-style-type: none">▪ <u>Listen to EAS</u> for updated information. Some areas may be inaccessible and there may be damage in others. Local EAS broadcasts will provide current information on continuing risks and protective measures to take.▪ <u>Avoid storm-damaged areas</u>. These areas are not safe immediately following a severe thunderstorm. Entry may increase personal risk and interfere with professional responders.▪ <u>Watch for fallen power lines and trees</u>, and report them immediately.

**COMMUNITY EMERGENCY RESPONSE TEAM
SEVERE THUNDERSTORMS**

INSTRUCTOR GUIDANCE	CONTENT
	<p>Does anyone have additional questions, comments, or concerns about severe thunderstorms?</p>

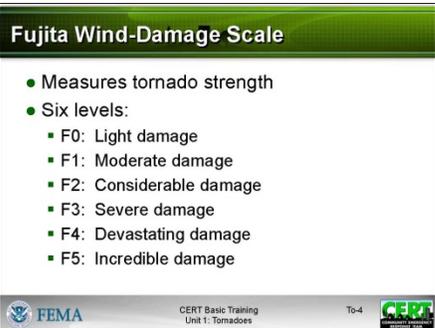
Tornadoes

INSTRUCTOR GUIDANCE	CONTENT
 <p>Tornadoes</p> <p>CERT Basic Training Hazards</p> <p>FEMA citizen corps</p> <p>Display Slide To-0</p>  <p>A Tornado Is...</p> <ul style="list-style-type: none">● Violently rotating column of air:<ul style="list-style-type: none">▪ Extending between, and in contact with, cloud and earth's surface▪ May be accompanied by winds in excess of 200 miles per hour <p>FEMA CERT Basic Training Unit 1: Tornadoes To-1</p> <p>Display Slide To-1</p> <p>http://rst.gsfc.nasa.gov/Sect14/tornado.jpg</p>	<p>Tornadoes</p> <p>Tell the participants that <u>tornadoes</u> are powerful, circular windstorms that may be accompanied by winds in excess of 200 miles per hour. Tornadoes typically develop during severe thunderstorms and may range in width from several hundred yards to more than a mile across.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES**

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="245 373 673 415">Tornado Risks</p> <ul data-bbox="261 428 535 632" style="list-style-type: none">● Rip trees apart● Destroy buildings● Uproot structures and objects● Send debris and glass flying● Overturn cars and mobile homes  <p data-bbox="240 653 673 688">FEMA CERT Basic Training Unit 1: Tornadoes To-2</p> <p data-bbox="240 722 513 758">Display Slide To-2</p> <p data-bbox="240 789 586 821">www.spc.noaa.gov/faq/tornado/f3.jpg</p>	<p data-bbox="706 363 927 394">Tornado Risks</p> <p data-bbox="706 436 1502 541">Explain that tornadoes pose a high risk because the low atmospheric pressure, combined with high wind velocity, can:</p> <ul data-bbox="706 562 1218 804" style="list-style-type: none">▪ Rip trees apart▪ Destroy buildings▪ Uproot structures and objects▪ Send debris and glass flying▪ Overturn cars and mobile homes
<p data-bbox="245 940 673 982">Tornado Facts</p> <ul data-bbox="261 995 657 1213" style="list-style-type: none">● Occur in every state● About 800 reported every year● About 180 people killed every year● Season runs March – August, but tornadoes can occur any time of year● Can occur any time of day but most likely to occur 3:00 p.m. to 9:00 p.m.● Annual damage can be hundreds of millions <p data-bbox="240 1234 673 1270">FEMA CERT Basic Training Unit 1: Tornadoes To-3</p> <p data-bbox="240 1304 513 1339">Display Slide To-3</p>	<p data-bbox="706 863 927 894">Tornado Facts</p> <p data-bbox="706 936 1502 1150">Point out that while tornadoes have been reported in every state, they are most prevalent east of the Colorado-Wyoming-New Mexico area. Most frequently, tornadoes are found in the area from Kansas to Kentucky, the Great Plains, and the Upper Midwest. “Tornado Alley” includes Texas, Oklahoma, and Kansas.</p> <p data-bbox="706 1192 1502 1297">Tell the participants that more than 800 tornadoes are reported nationwide in an average year. Tornadoes can happen any time of the year and any time of day.</p> <p data-bbox="706 1339 1502 1518">Explain that tornado season lasts from March to August, but can occur year-round. More than 80 percent of tornadoes occur between noon and midnight, and one quarter occur from 4:00 p.m. to 6:00 p.m. Tornadoes are most likely to occur between 3:00 p.m. and 9:00 p.m.</p> <p data-bbox="706 1560 1502 1696">Tell the group that 9,000 deaths have been attributed to tornadoes in the past 50 years – an average of about 180 people each year. Annual damage from tornadoes can run into the hundreds of millions of dollars.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Fujita Wind-Damage Scale</p> <ul style="list-style-type: none">• Measures tornado strength• Six levels:<ul style="list-style-type: none">▪ F0: Light damage▪ F1: Moderate damage▪ F2: Considerable damage▪ F3: Severe damage▪ F4: Devastating damage▪ F5: Incredible damage <p>FEMA CERT Basic Training Unit 1: Tornadoes To-4</p> <p>Display Slide To-4</p> <p>PM, P. To-3</p>	<p>Explain that the population in the ten tornado-prone States is increasing because of more rapid urban development, which increases the likelihood of injuries and deaths.</p> <p>Fujita Wind-Damage Scale</p> <p>Refer the participants to the chart titled <i>Fujita Wind-Damage Scale</i> in their Participant Manuals. Explain that tornado strength is measured on the Fujita Wind-Damage Scale, which correlates damage with wind speed. There are six wind-damage levels on the scale:</p> <ul style="list-style-type: none">▪ F0:<ul style="list-style-type: none">• Winds: Up to 72 miles per hour (mph)• Damage: Light▪ F1:<ul style="list-style-type: none">• Winds: 73–112 mph• Damage: Moderate▪ F2:<ul style="list-style-type: none">• Winds: 113–157 mph• Damage: Considerable▪ F3:<ul style="list-style-type: none">• Winds: 158–206 mph• Damage: Severe▪ F4:<ul style="list-style-type: none">• Winds: 207–260 mph• Damage: Devastating▪ F5:<ul style="list-style-type: none">• Winds: 261 mph or greater• Damage: Incredible

**COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES**

INSTRUCTOR GUIDANCE	CONTENT
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PM, P. To-3	Fujita Wind-Damage Scale
WIND-DAMAGE LEVEL	WIND SPEED AND ANTICIPATED DAMAGE
F0	<ul style="list-style-type: none">▪ Winds: Up to 72 miles per hour (mph)▪ Damage: Light
F1	<ul style="list-style-type: none">▪ Winds: 73–112 mph▪ Damage: Moderate
F2	<ul style="list-style-type: none">▪ Winds: 113–157 mph▪ Damage: Considerable
F3	<ul style="list-style-type: none">▪ Winds: 158–206 mph▪ Damage: Severe
F4	<ul style="list-style-type: none">▪ Winds: 207–260 mph▪ Damage: Devastating
F5	<ul style="list-style-type: none">▪ Winds: 261 mph or greater▪ Damage: Incredible

**COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES**

INSTRUCTOR GUIDANCE	CONTENT
<p>If your community is located near a large body of water, take a few moments to explain the differences between tornadoes and water spouts, including differences in the times of year they can be expected.</p>  <p>Allow the participants time to respond.</p> <div data-bbox="237 1083 675 1413"><p>Tornado Preparedness</p><ul style="list-style-type: none">● Know the risk● Identify potential shelter areas● Learn the community's warning system● Conduct family tornado drills<p>FEMA CERT Basic Training Unit 1: Tornadoes To-5</p></div> <p>Display Slide To-5</p>	<p>Tell the participants that, although the Midwest and sections of the Southeast have the highest risk of tornadoes, with the help of sophisticated radar and other measures, meteorologists are now able to predict when conditions favorable for tornado formation exist and are able to warn the public better.</p> <p>Stress that many tornadoes (usually F0 and F1) are still unreported or unconfirmed.</p> <p>How can you prepare for a tornado? Summarize the discussion using the slide.</p> <p>Preparing for a Tornado</p> <p>Be sure to make the points listed below.</p> <ul style="list-style-type: none">▪ <u>Know the risk</u> for tornadoes in the area. Although tornadoes have been reported throughout the United States, some areas are clearly at higher risk than others.▪ <u>Identify potential shelter areas</u> where family members can gather during a tornado. <p>The best shelter from a tornado is to be underground.</p> <p>If an underground shelter or tornado-safe room is not available, move to an interior room or hallway on the lowest floor and get under a sturdy piece of furniture. The idea is to get as many walls and roofs between you and the outside as possible. Avoid rooms with large free-span roofs.</p> <p>Mobile homes, even if tied down, offer little protection from tornadoes and should be abandoned in favor of more substantial shelter.</p>

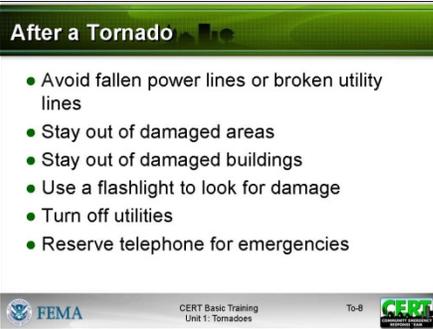
**COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES**

INSTRUCTOR GUIDANCE	CONTENT
<p>Take this opportunity to explain your community's tornado warning system.</p>  <p>Allow the participants time to respond.</p>	<ul style="list-style-type: none">▪ <u>Learn the community's warning system.</u> Many areas use Emergency Alert System (EAS) to warn of imminent hazards. Within these areas, though, communities may have other warning systems for tornadoes, including sirens that are also used to signal fires and other hazards. For those who live in communities that use sirens, it is critical to learn the siren warning tone to ensure recognition. Also, when severe weather threatens, NOAA weather radio carries current information and instructions.▪ <u>Conduct periodic tornado drills</u> with the family to ensure that all family members know what to do and where to go during a tornado emergency. <p>What do you look for to recognize a tornado?</p> <p>Stress that the "obvious" is not always as obvious as we think.</p> <ul style="list-style-type: none">▪ Tornadoes may appear nearly transparent until they pick up dust and debris.▪ Tornadoes can be wrapped in heavy rain, which may limit visibility; however, because tornadoes are associated with powerful updrafts, <u>rain does not always fall</u> in or near tornadoes.

COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES

INSTRUCTOR GUIDANCE	CONTENT
<p>Tornado Warning Signs</p> <ul style="list-style-type: none">• High winds• Very large hail  <p>FEMA CERT Basic Training Unit 1: Tornadoes To-6</p> <p>Display Slide To-6</p> <p>http://snrs.unl.edu/amet351/hull/hailstorm2.jpg</p> 	<p>Tornado Clues</p> <p>Occasionally tornadoes develop so rapidly that advance warning is not possible. Remain alert to signs of an approaching tornado, notably the sound that is something like an approaching freight train.</p> <p>Emphasize that the most obvious clues that a tornado may be forming or has formed are <u>high winds</u> and <u>very large hail</u>. Urge the participants to be alert for these clues and to take protective action, even if no tornado warning is issued.</p> <p>What should you do when you see a tornado or receive a tornado warning?</p> <p>Allow the participants time to respond. Summarize the discussion using the visual.</p>
<p>During a Tornado</p> <ul style="list-style-type: none">• Keep windows and doors closed and stay away from them• Use shielding and protective clothing<ul style="list-style-type: none">▪ Furniture▪ Blankets▪ Bike helmets• Listen to EAS or NOAA Weather Radio <p>FEMA CERT Basic Training Unit 1: Tornadoes To-7</p> <p>Display Slide To-7</p>	<p>During a Tornado</p> <p>Emphasize that:</p> <ul style="list-style-type: none">▪ Damage often occurs when wind gets inside a home. <u>Keep all windows and doors closed</u>. Houses do not explode because of air pressure differences.▪ <u>Go immediately to an underground shelter or tornado-safe room</u>, or interior room or hallway on the lowest floor.▪ <u>Put as much shielding material (such as furniture, blankets, bike helmets, etc.) as you can around you.</u>▪ <u>Listen to EAS or NOAA Weather Radio</u> for current emergency information and instructions. <p>Continue by telling the group that if they are driving and see a tornado <u>go to a nearby sturdy building</u> and seek an area on the lowest level, without windows. If there are no buildings nearby, <u>get out and away from the vehicle</u> and lie down in a low spot on the ground. Protect the head and neck.</p>

COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES

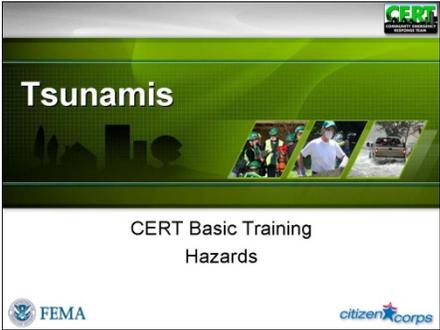
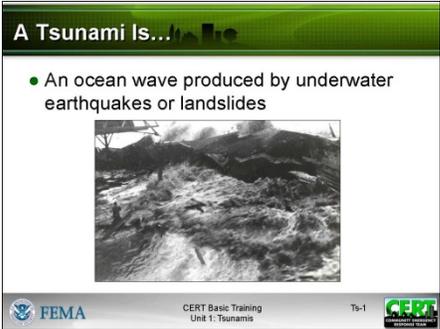
INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 359 673 688"></p> <p data-bbox="240 722 513 758">Display Slide To-8</p> <p data-bbox="240 989 315 1058"></p> <p data-bbox="240 1167 410 1203">PM, P. To-6</p>	<p data-bbox="706 359 1507 506">Explain that following a tornado, citizens should continue listening to EAS or NOAA weather radio for updated information and instructions. As with many other hazards, post-tornado actions include:</p> <ul data-bbox="706 527 1507 926" style="list-style-type: none">▪ <u>Avoiding fallen power lines or broken utility lines</u> and immediately reporting those you see▪ <u>Staying out of damaged areas</u> until told that it is safe to enter▪ <u>Staying out of damaged buildings</u>▪ <u>Using a flashlight to look for damage</u> and fire hazards and documenting damage for insurance purposes▪ <u>Turning off utilities</u>, if necessary▪ <u>Reserving the telephone for emergencies</u> <p data-bbox="706 989 1507 1094">Does anyone have additional questions, comments, or concerns about tornadoes or tornado preparedness and response?</p> <p data-bbox="706 1136 1507 1241">Refer the participants to <i>Tornado Myths and Facts</i> in the Participant Manual. Suggest that they review these myths and facts after the session.</p>

COMMUNITY EMERGENCY RESPONSE TEAM
TORNADOES

PM, P. To-8	Tornado Myths and Facts
Myth: Fact:	Areas near lakes, rivers, and mountains are safe from tornadoes. No place is safe from tornadoes. A tornado near Yellowstone National Park left a path of destruction up and down a 10,000-foot mountain.
Myth: Fact:	The low pressure with a tornado causes buildings to explode as the tornado passes overhead. Violent winds and debris slamming into buildings cause most structural damage.
Myth: Fact:	Windows should be opened before a tornado approaches to equalize pressure and minimize damage. Windows should be left <u>closed</u> to minimize damage from flying debris and to keep the high wind out of the structure.
Myth: Fact:	If you are driving and see a tornado, you should drive at a right angle to the storm. The best thing to do is seek the best available shelter. Many people are injured or killed by remaining in their vehicles.
Myth: Fact:	People caught in the open should seek shelter under highway overpasses. Do <u>not</u> seek shelter under highway overpasses or under bridges. If possible, take shelter in a sturdy, reinforced building.

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Tsunamis

INSTRUCTOR GUIDANCE	CONTENT
 <p>Tsunamis</p> <p>CERT Basic Training Hazards</p> <p>FEMA citizen corps</p> <p>Display Slide Ts-0</p>  <p>A Tsunami Is...</p> <ul style="list-style-type: none">• An ocean wave produced by underwater earthquakes or landslides <p>FEMA CERT Basic Training Unit 1: Tsunamis Ts-1</p> <p>Display Slide Ts-1</p>	<p><i>Tsunamis</i></p> <p>Tell the participants that <u>tsunamis</u> are ocean waves that are produced by underwater earthquakes or landslides. The word is Japanese and means “harbor wave” because of the devastating effects that these waves have had on low-lying Japanese coastal communities. Tsunamis are often incorrectly referred to as tidal waves.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 453 675 779" data-label="Image"> </div> <p data-bbox="240 821 513 852">Display Slide Ts-2</p> <div data-bbox="240 1003 675 1329" data-label="Image"> </div> <p data-bbox="240 1371 513 1402">Display Slide Ts-3</p>	<p data-bbox="706 363 1081 394">Risk Posed by Tsunamis</p> <p data-bbox="706 457 1511 562">Explain that tsunamis pose the greatest risk to areas less than 25 feet above sea level and within one mile of the shoreline. They can cause:</p> <ul data-bbox="706 583 1299 877" style="list-style-type: none"> ▪ Flooding ▪ Contamination of drinking water ▪ Fires from ruptured tanks or gas lines ▪ Loss of vital community infrastructure ▪ Complete devastation of coastal areas ▪ Death <p data-bbox="706 898 1490 972">Stress that <u>most deaths caused by tsunamis result from drowning.</u></p> <p data-bbox="706 1010 1479 1224">Tell the group that since 1945, six tsunamis have killed more than 350 people and caused 500 million dollars worth of property damage in Hawaii, Alaska, and the West Coast. In the United States and its territories, 24 tsunamis have caused damage during the past 224 years.</p> <p data-bbox="706 1245 1511 1602">Point out that the common scientific definition of tsunami wave height ranges between a few inches and about 100 feet (30 meters). Some tsunamis have produced wave heights of up to 200 feet (60 meters), for example, the 1964 Alaska subduction earthquake. Tsunamis can travel upstream in coastal estuaries and rivers, with damaging waves as high as sixty feet extending farther inland than the immediate coast. A tsunami can occur during any season of the year and at any time, day or night.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>	<p>Explain that the first wave of a tsunami is usually not the largest in a series of waves, nor is it the most significant. One coastal community may experience no damaging waves, while another, not far away, may experience destructive deadly waves. Depending on a number of factors, some low-lying areas could experience severe inundation of water and debris several miles or more inland.</p> <p>Tell the participants that tsunami warnings originate from two agencies:</p> <ul style="list-style-type: none">▪ <u>The West Coast/Alaska Tsunami Warning Center (WC/ATWC)</u> is responsible for tsunami warnings for California, Oregon, Washington, British Columbia, and Alaska.▪ <u>The Pacific Tsunami Warning Center (PTWC)</u> is responsible for providing warnings to international authorities, Hawaii, and U.S. territories within the Pacific basin. <p>Point out that the two Tsunami Warning Centers coordinate the information that is being disseminated.</p> <p>Tsunami Preparedness</p> <p>How can you prepare for a tsunami?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 359 675 688" style="border: 1px solid black; padding: 5px;"> <p>Tsunami Preparedness</p> <ul style="list-style-type: none"> ● Know risk and "coastal clues" ● Plan and practice evacuation routes ● Discuss tsunamis with your family ● Talk to your insurance agent ● Use NOAA Weather Radio <p style="font-size: small; text-align: center;">  CERT Basic Training Unit 1: Tsunamis Ts-4  </p> </div> <p>Display Slide Ts-4</p> <div data-bbox="237 1682 315 1755" style="text-align: center;">  </div> <p>Allow the participants time to respond.</p>	<p>Summarize the discussion using the slide. Be sure to make the points listed below.</p> <ul style="list-style-type: none"> ▪ <u>Know the risk</u> for tsunamis in the area. Know the height of your street above sea level and the distance of your street from the coast or other high-risk waters. Evacuation orders may be based on these numbers. ▪ <u>Be aware of coastal clues</u>. The waterline will withdraw and disappear out to sea, followed by a series of high waves reaching farther and farther inland. Remember that the series of tsunami waves won't necessarily occur at regular intervals. ▪ <u>Plan and practice evacuation routes</u>. If possible, pick an area 100 feet or more above sea level, or go at least 2 miles inland, away from the coastline. You should be able to reach your safe location on foot within 15 minutes. Be able to follow your escape route at night and during inclement weather. If you are visiting an area at risk from tsunamis, check with the hotel, motel, or campground operators for evacuation information. ▪ <u>Discuss tsunamis with your family</u>. Discussing tsunamis ahead of time will help reduce fear and anxiety and let everyone know how to respond. Review flood safety and preparedness measures with your family. ▪ <u>Talk to your insurance agent</u>. Homeowners' policies do not cover flooding from a tsunami. Ask your agent about the National Flood Insurance Program (NFIP). ▪ <u>Use a NOAA Weather Radio</u> with a tone-alert feature to keep you informed of local watches and warnings. <p>How do you protect your property in case of a tsunami?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 394 678 724"> <p>Protecting Property</p> <ul style="list-style-type: none"> ● Avoid living within several hundred feet of coastline ● Elevate coastal homes ● Consult with professional <p>FEMA CERT Basic Training Unit 1: Tsunamis Ts-5</p> </div> <p>Display Slide Ts-5</p> <div data-bbox="240 867 316 940"> </div> <p>Allow the participants time to respond.</p> <div data-bbox="240 1087 678 1417"> <p>Tsunami Preparedness</p> <ul style="list-style-type: none"> ● If strong, coastal earthquake occurs: <ul style="list-style-type: none"> ▪ Drop, cover, and hold <ul style="list-style-type: none"> – When shaking stops, evacuate quickly to higher ground away from coast, up to two miles inland ▪ Gather your family ▪ Leave everything else behind ▪ Avoid downed power lines, buildings, and bridges <p>FEMA CERT Basic Training Unit 1: Tsunamis Ts-6</p> </div> <p>Display Slide Ts-6</p> <div data-bbox="240 1633 316 1707"> </div> <p>Allow the group time to respond.</p>	<p>Suggest the following ways to protect property:</p> <ul style="list-style-type: none"> ▪ <u>Avoid building or living in buildings within several hundred feet of the coastline.</u> These areas are most likely to experience damage from tsunamis, strong winds, or coastal storms. ▪ <u>Elevate coastal homes.</u> Most tsunami waves are less than 10 feet high. ▪ <u>Consult with a professional</u> for advice about ways to make your home more resistant to tsunami. Also, there may be ways to divert waves away from your property. <p>What do you do if you feel a strong coastal earthquake?</p> <p>Use the slide to explain the actions that they should take. Be sure to emphasize the following points:</p> <ul style="list-style-type: none"> ▪ <u>Drop, cover, and hold.</u> You should protect yourself from the earthquake first. ▪ <u>When the shaking stops, gather your family members and evacuate quickly.</u> Leave everything else behind. <u>A tsunami could occur within minutes.</u> Move quickly to higher ground away from the coast, up to two miles inland. ▪ <u>Avoid downed power lines, and stay away from buildings and bridges from which heavy objects might fall during an aftershock.</u> <p>What should you do when you receive a Tsunami Warning?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 359 675 688" style="border: 1px solid black; padding: 5px;"> <p>If a Warning is Issued</p> <ul style="list-style-type: none"> ● If in tsunami risk area, evacuate immediately ● Follow instructions issued by local authorities ● Get to higher ground as far inland as possible ● Listen to NOAA Weather Radio or Coast Guard emergency frequency station ● Return home only after local officials tell you that it is safe ● If already out on ocean, be sure to get as far from coast as possible <p style="font-size: small; margin-top: 5px;">  CERT Basic Training Unit 1-Tsunamis Ts-7  </p> </div> <p>Display Slide Ts-7</p> <p>Emphasize that watching a tsunami from the beach or cliffs can put people in grave danger. If a person can see the wave, he or she is too close to escape it.</p>	<p>Use the slide to summarize the discussion. Discuss the following actions:</p> <ul style="list-style-type: none"> ▪ If you are in a tsunami risk area and you hear an official tsunami warning or detect signs of a tsunami, <u>evacuate at once</u>. A tsunami warning is issued when authorities are certain that a tsunami threat exists, and there may be little time to get out. ▪ <u>Follow instructions issued by local authorities</u>. Recommended evacuation routes may be different from the one you planned, or you may be advised to move to higher ground than you had planned. ▪ <u>Get to higher ground as far inland as possible</u>. Officials cannot reliably predict either the height or local effects of tsunamis. ▪ <u>Listen to a NOAA Weather Radio or Coast Guard emergency frequency station</u> for updated emergency information. ▪ <u>Return home only after local officials tell you that it is safe</u>. A tsunami is a series of waves that may continue for hours. Do not assume that after one wave, the danger is over. The next wave may be larger than the first one. ▪ <u>If you are out on a boat when the warning is issued, move as far out from the coast as possible</u>. This action could prevent the waves from carrying your craft inland where it is likely to sustain damage and the risk of fatality is great.

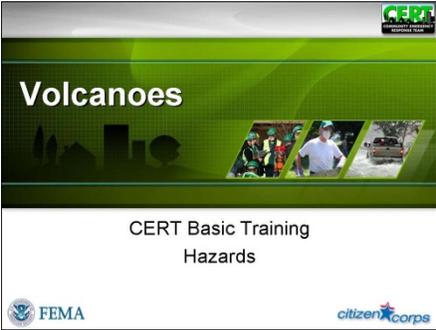
**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>PM, P. Ts-5</p>	<p>Explain that, following a tsunami, citizens should continue listening to a NOAA Weather Radio or Coast Guard emergency frequency station for updated emergency information and instructions. As with many other hazards, post-tsunami actions include:</p> <ul style="list-style-type: none"> ▪ <u>Avoiding fallen power lines or broken utility lines</u> and immediately reporting those that you see ▪ <u>Staying out of damaged areas</u> until told that it is safe to enter. The risk of contamination and disease is very high ▪ <u>Staying out of damaged buildings</u> ▪ <u>Using a flashlight to look for damage</u> and fire hazards, and documenting damage for insurance purposes ▪ <u>Turning off utilities</u>, if necessary ▪ <u>Reserving the telephone</u> for emergencies <p>Does anyone have additional questions, comments, or concerns about tsunamis or tsunami preparedness and response?</p> <p>Refer the participants to <i>Tsunami Myths and Facts</i> in the Participant Manual. Suggest that they review these myths and facts after the session.</p>

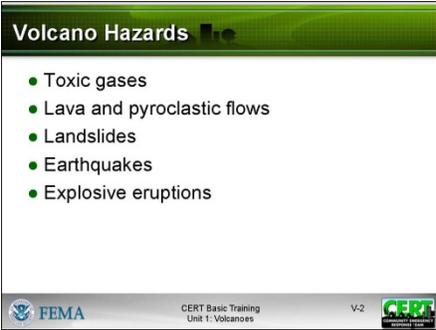
**COMMUNITY EMERGENCY RESPONSE TEAM
TSUNAMIS**

PM, P. Ts-5	Tsunami Myths and Facts
Myth: Fact:	Tsunamis are giant walls of water. Tsunamis normally have the appearance of a fast-rising and receding flood. They can be similar to a tide cycle occurring over 10-60 minutes instead of 12 hours. Occasionally, tsunamis can form walls of water, known as tsunami bores, when the waves are high enough and the shoreline configuration is appropriate.
Myth: Fact:	Tsunamis are a single wave. Tsunamis are a series of waves. Often the initial wave is not the largest. The largest wave may occur several hours after the initial activity has started at a coastal location.
Myth: Fact:	Boats should seek protection of a bay or harbor during a tsunami. Tsunamis are often most destructive in bays and harbors. Tsunamis are least destructive in deep, open ocean waters. Boats already out to sea should travel as far out as possible to prevent being carried to shore.

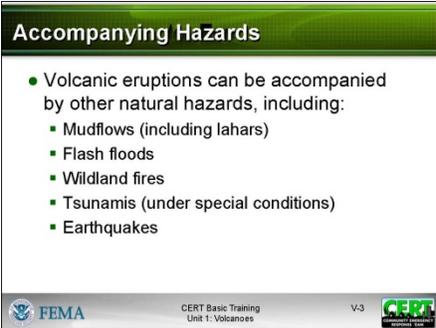
Volcanoes

INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide V-0</p>  <p>Display Slide V-1</p> <p>A lahar is a type of mudflow composed of pyroclastic material and water that flows down from a volcano, typically along a river valley.</p>	<p>Introduction</p> <p>Explain that a <u>volcano</u> is a vent through which molten rock escapes to the Earth's surface. Unlike other mountains, which are pushed up from below, volcanoes are built by surface accumulation of their eruptive products—layers of lava, ashflows, and ash. When pressure from gases within the molten rock becomes too great, an <u>eruption</u> occurs.</p> <p>Tell the group that the United States is third in the world, after Japan and Indonesia, for the number of active volcanoes. Since 1980, as many as five volcanoes have erupted each year in the United States.</p> <p>Point out that eruptions are most likely to occur in Hawaii and Alaska. For the Cascade Range in Washington, Oregon, and California, volcanoes erupt on the average of one to two each century.</p> <p>Also, when Cascade volcanoes do erupt, high-speed avalanches of <u>pyroclastic flows (hot ash and rock)</u>, <u>lava flows</u>, and <u>landslides</u> can devastate areas 10 or more miles away. Lahars can inundate valleys more than 50 miles downstream.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES**

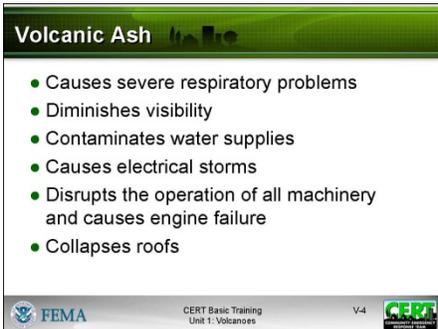
INSTRUCTOR GUIDANCE	CONTENT
 <p>Volcano Hazards</p> <ul style="list-style-type: none">● Toxic gases● Lava and pyroclastic flows● Landslides● Earthquakes● Explosive eruptions <p>FEMA CERT Basic Training Unit 1: Volcanoes V-2</p> <p>Display Slide V-2</p>	<p>Emphasize that the island of Hawaii (the largest of the Hawaiian Islands) experiences thousands of earthquakes associated with active volcanoes each year. While most of these are too small to feel, about once a decade a large quake shakes the entire island and causes widespread damage.</p> <p>Explain that volcanoes produce a wide variety of hazards that can kill people and destroy property. Large explosive eruptions can endanger people and property hundreds of miles away and can even affect the global climate.</p> <p>Volcanic Hazards</p> <p>Tell the group that volcanic hazards include:</p> <ul style="list-style-type: none">▪ Toxic gases▪ Lava and pyroclastic flows▪ Landslides▪ Earthquakes▪ Explosive eruptions <p>Point out that eruptions can be relatively quiet, producing lava flows that creep across the land at 2 to 10 miles per hour (mph). Explosive eruptions can shoot columns of gases and rock fragments tens of miles into the atmosphere, spreading ash hundreds of miles downwind.</p> <p>Define <u>lava flows</u> as streams of molten rock that either pour from a vent quietly or erupt explosively as lava fountains. Because of their intense heat, lava flows are also great fire hazards. Lava flows destroy everything in their path, but most move slowly enough that people can move out of the way.</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Accompanying Hazards</p> <ul style="list-style-type: none">● Volcanic eruptions can be accompanied by other natural hazards, including:<ul style="list-style-type: none">▪ Mudflows (including lahars)▪ Flash floods▪ Wildland fires▪ Tsunamis (under special conditions)▪ Earthquakes <p>FEMA CERT Basic Training Unit 1: Volcanoes V-3</p>	<p>Explain that, it is, however, almost impossible to channel the lava flow away from towns and neighborhoods. Do not attempt to divert a lava flow; ultimately, it will destroy anything in its path. The speed at which lava moves across the ground depends on several factors, including the:</p> <ul style="list-style-type: none">▪ Type of lava that has erupted▪ Steepness of the ground▪ Rate of lava production at the vent <p>Remind participants that the lava flow on the surface cools faster than the lava trapped inside the crust. NEVER climb on a lava crust unless it has been deemed safe by a proper authority.</p> <p>Accompanying Hazards</p> <p>Explain that volcanic eruptions can be accompanied by other natural hazards, including:</p> <ul style="list-style-type: none">▪ Mudflows (including lahars)▪ Flash floods▪ Wildland fires▪ Tsunamis (under special conditions)▪ Earthquakes

Display Slide V-3

COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="188 926 266 995"></p> <p data-bbox="188 1035 597 1104">Allow the participants time to respond.</p> <div data-bbox="188 1178 626 1507"><p data-bbox="199 1199 342 1224">Volcanic Ash</p><ul data-bbox="215 1249 565 1434" style="list-style-type: none">● Causes severe respiratory problems● Diminishes visibility● Contaminates water supplies● Causes electrical storms● Disrupts the operation of all machinery and causes engine failure● Collapses roofs<p data-bbox="199 1478 272 1499">FEMA</p><p data-bbox="370 1478 448 1499">CERT Basic Training Unit 1: Volcanoes</p><p data-bbox="540 1478 553 1491">V-4</p></div> <p data-bbox="188 1545 448 1581">Display Slide V-4</p>	<p data-bbox="657 369 1446 621">Emphasize that historically, <u>lahars</u> have been one of the deadliest volcano hazards. Lahars are mudflows or debris flows composed mostly of volcanic materials on the flanks of a volcano. These flows of mud, rock, and water can rush down valley and stream channels at speeds of 20 to 40 miles per hour and can travel more than 50 miles.</p> <p data-bbox="657 663 1430 804">Caution the group that lahars can occur both during an eruption and when a volcano is quiet. The water that creates lahars can come from melting snow and ice, intense rainfall, or the breakout of a summit crater lake.</p> <p data-bbox="657 846 857 879">Volcanic Ash</p> <p data-bbox="657 921 1393 991">What are some hazards associated with volcanic ash?</p> <p data-bbox="657 1146 1430 1287">Use the slide to elaborate on the hazards. Explain that <u>volcanic ash</u> is actually fine, glassy rock fragments that can affect people and equipment hundreds of miles away from the cone of the volcano. Volcanic ash will:</p> <ul data-bbox="657 1308 1409 1677" style="list-style-type: none">▪ Cause severe respiratory problems▪ Diminish visibility▪ Contaminate water supplies▪ Cause electrical storms▪ Disrupt the operation of all machinery and cause engine failure, which is particularly problematic for aircraft▪ Collapse roofs

COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="188 449 267 520"></p> <p data-bbox="188 558 597 625">Allow the participants time to respond.</p> <div data-bbox="188 667 626 995"><p data-bbox="199 684 467 709">Preparing for an Eruption</p><ul data-bbox="215 730 493 869" style="list-style-type: none">● Understand the risk● Talk to your insurance agency● Prepare disaster supply kit● Develop evacuation plan● Develop shelter-in-place plan<p data-bbox="199 961 623 991">FEMA CERT Basic Training Unit 1: Volcanoes V-5</p></div> <p data-bbox="188 1033 448 1066">Display Slide V-5</p> <p data-bbox="188 1323 267 1394"></p> <p data-bbox="188 1432 597 1499">Allow the participants time to respond.</p>	<p data-bbox="659 369 1149 403">Volcanic Eruption Preparedness</p> <p data-bbox="659 445 1341 478">How can you prepare for volcanic eruptions?</p> <p data-bbox="659 667 1455 701">Emphasize key steps in volcanic eruption preparedness:</p> <ul data-bbox="659 722 1468 1184" style="list-style-type: none">▪ <u>Understand the risk</u>. Take time to learn about the risk from volcanic eruption in your area.▪ <u>Talk to your insurance agent</u>. Find out what your homeowner's policy will or will not cover in the event of a volcanic eruption.▪ <u>Prepare a disaster supply kit</u>, including goggles and dust mask for every family member.▪ <u>Develop an evacuation plan</u>. Everyone in your family should know where to go if they have to leave.▪ <u>Develop a shelter-in-place</u> plan if you determine that the central risk relates to ash rather than lava flows. <p data-bbox="659 1243 1068 1276">During a Volcanic Eruption</p> <p data-bbox="659 1318 1390 1352">What should you do <u>during</u> a volcanic eruption?</p>

COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="190 369 626 695"><p>During an Eruption</p><ul style="list-style-type: none">● Follow evacuation orders● Avoid areas downwind and river valleys downstream of the volcano● If outside, protect yourself from ashfall● Be prepared for accompanying hazards<p>FEMA CERT Basic Training Unit 1: Volcanoes V-6</p></div> <p data-bbox="190 730 448 768">Display Slide V-6</p> <div data-bbox="190 1241 269 1314"></div> <p data-bbox="190 1352 597 1419">Allow the participants time to respond.</p>	<p data-bbox="659 369 1463 443">Summarize the discussion using the information from the slide below. Be sure to make the following points:</p> <ul style="list-style-type: none">▪ <u>Follow evacuation orders.</u> Staying at home to wait out an eruption, if you are in a hazardous zone, could be very dangerous. Take the advice of local authorities.▪ <u>Avoid areas downwind and river valleys downstream of the volcano.</u> Debris and ash will be carried by wind and gravity. Stay in areas where you will not be exposed further to volcanic eruption hazards.▪ <u>If outside, protect yourself from ashfall.</u> Volcanic ash will cause severe injury to breathing passages, eyes, and open wounds, and irritation to skin. In addition, ashfall will often make travel impossible as it limits visibility and can cause engine failure.▪ <u>Be prepared for accompanying hazards.</u> Know how to respond to reduce your risk. <p data-bbox="659 1163 1040 1201">After a Volcanic Eruption</p> <p data-bbox="659 1236 1360 1274">What should you do <u>after</u> a volcanic eruption?</p>

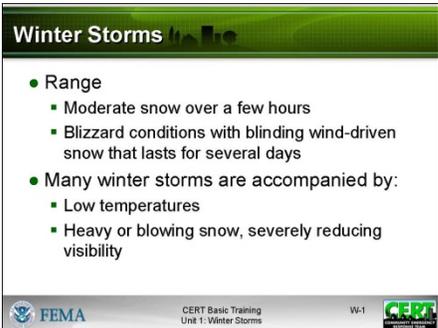
COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="196 380 427 411">After an Eruption</p> <ul data-bbox="215 436 568 537" style="list-style-type: none">● Stay away from volcanic ashfall areas● Avoid driving in heavy ashfall● If you have a respiratory ailment, avoid contact with any amount of ash <p data-bbox="196 663 625 695">FEMA CERT Basic Training Unit 1: Volcanoes V-7 CERT</p> <p data-bbox="188 732 448 764">Display Slide V-7</p> 	<p data-bbox="659 369 1458 438">Summarize the discussion using the information from the slide below. Be sure to make the following points:</p> <ul data-bbox="659 459 1458 926" style="list-style-type: none">▪ <u>Stay away from volcanic ashfall areas.</u> The fine, glassy particles of volcanic ash will increase the health risk to children and people with existing respiratory conditions such as asthma, chronic bronchitis, or emphysema.▪ <u>Avoid driving in heavy ashfall.</u> Driving will stir up volcanic ash that can clog engines and stall vehicles. Moving parts, including bearings, brakes, and transmissions, can be damaged from abrasion.▪ <u>If you have a respiratory ailment, avoid contact with any amount of ash.</u> Stay indoors until local health officials advise that it is safe to go outside. <p data-bbox="659 984 1430 1054">Does anyone have any additional questions, comments, or concerns, about volcanic eruptions?</p>

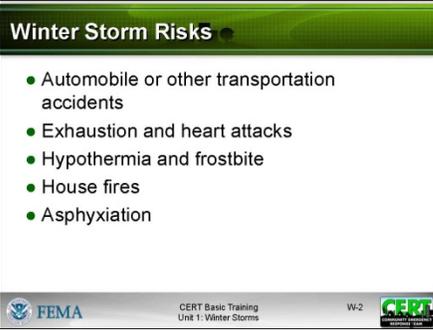
**COMMUNITY EMERGENCY RESPONSE TEAM
VOLCANOES**

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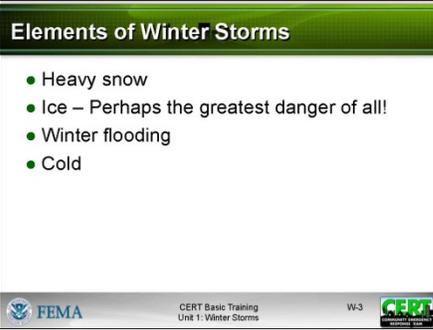
Winter Storms

INSTRUCTOR GUIDANCE	CONTENT
 <p>Winter Storms</p> <p>CERT Basic Training Hazards</p> <p>FEMA citizen corps</p> <p>Display Slide W-0</p>  <p>Winter Storms</p> <ul style="list-style-type: none">● Range<ul style="list-style-type: none">■ Moderate snow over a few hours■ Blizzard conditions with blinding wind-driven snow that lasts for several days● Many winter storms are accompanied by:<ul style="list-style-type: none">■ Low temperatures■ Heavy or blowing snow, severely reducing visibility <p>FEMA CERT Basic Training Unit 1: Winter Storms W-1</p> <p>Display Slide W-1</p>	<p>Introduction</p> <p>Explain that a winter storm can range from a moderate snow over a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Many winter storms are accompanied by low temperatures and heavy or blowing snow, which can severely reduce visibility.</p> <p>Tell the group that some winter storms may be large enough to affect several states, while others may affect only a single community.</p> <p>Stress that winter storms are defined differently in various parts of the country. Urge the participants to check with their local emergency management office, the National Weather Service (NWS) office, or local chapter of the American Red Cross for terms and definitions specific to their area.</p>

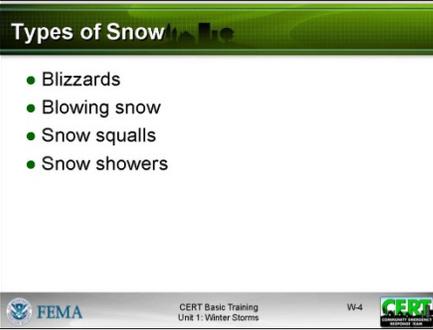
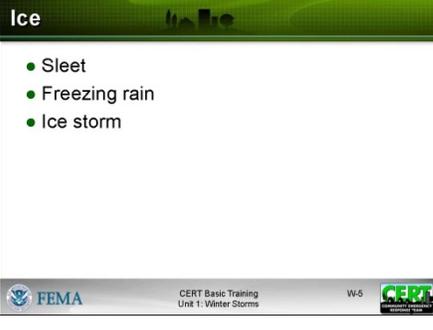
COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 331 673 661"></div> <p data-bbox="240 693 503 724">Display Slide W-2</p> <p data-bbox="240 798 673 871">Hypothermia will be covered in more detail in a few minutes.</p> <div data-bbox="240 1564 316 1638"></div> <p data-bbox="240 1669 673 1743">Allow the participants time to respond.</p>	<h3 data-bbox="706 331 982 367">Winter Storm Risk</h3> <p data-bbox="706 420 1510 567">Tell the group that winter storms are considered deceptive killers because most deaths are indirectly related to the storm. Use the slide to discuss the risks to human life caused by winter storms.</p> <ul data-bbox="706 588 1510 1417" style="list-style-type: none"><li data-bbox="706 588 1510 661">▪ <u>Automobile or other transportation accidents</u>: This is the leading cause of death during winter storms.<li data-bbox="706 682 1510 787">▪ <u>Exhaustion and heart attacks</u>: Caused by overexertion, these are the two most likely causes of winter storm-related deaths.<li data-bbox="706 808 1510 976">▪ <u>Hypothermia and frostbite</u>: Elderly people account for the largest percentage of hypothermia victims. Many older Americans literally freeze to death in their own homes after being exposed to dangerously cold indoor temperatures.<li data-bbox="706 997 1510 1291">▪ <u>House fires</u>: These occur more frequently in the winter because of the lack of proper safety precautions when using alternate heating sources (unattended fires, disposal of ashes too soon, improperly placed space heaters, etc.). Fire during winter storms presents a great danger because water supplies may freeze, and it may be difficult for firefighting equipment to get to the fire.<li data-bbox="706 1312 1510 1417">▪ <u>Asphyxiation</u>: In an effort to get warm, people asphyxiate because of improper use of fuels such as charcoal briquettes, which produce carbon monoxide. <h3 data-bbox="706 1470 1112 1501">Elements of Winter Storms</h3> <p data-bbox="706 1564 1453 1596">What are some of the elements of winter storms?</p>

**COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS**

INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide W-3</p>	<p>Use the slide to elaborate on the elements of winter storms. Explain that the elements of winter storms include:</p> <ul style="list-style-type: none">▪ Heavy snow▪ Ice – perhaps the greatest danger of all!▪ Winter flooding▪ Cold <p>Heavy Snow</p> <p>Tell the group that heavy snow can:</p> <ul style="list-style-type: none">▪ Immobilize regions and paralyze cities.▪ Strand commuters.▪ Close airports.▪ Disrupt emergency and medical services. <p>Point out that accumulations of snow can cause roofs to collapse and knock down trees and power lines. Homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of removing snow and repairing damage, and the resulting loss of business, can have severe economic impacts on cities and towns.</p> <p>Explain that in the mountains, heavy snow can lead to masses of tumbling snow called avalanches. More than 80 percent of midwinter avalanches are triggered by a rapid accumulation of snow, and 90 percent of those occur within 24 hours of snowfall.</p> <p>Caution the group that an avalanche may reach a mass of a million tons and travel at speeds of up to 200 miles per hour (mph).</p>

COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Types of Snow</p> <ul style="list-style-type: none">• Blizzards• Blowing snow• Snow squalls• Snow showers <p>FEMA CERT Basic Training Unit 1: Winter Storms W-4</p> <p>Display Slide W-4</p>	<h3>Types of Snow</h3> <p>Define the different kinds of snowfall:</p> <ul style="list-style-type: none">▪ <u>Blizzards</u> are accompanied by winds of 35 mph or more with snow and blowing snow, reducing visibility to less than one-quarter mile for at least 3 hours.▪ <u>Blowing snow</u> is wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground that is picked up by the wind.▪ <u>Snow squalls</u> are brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.▪ <u>Snow showers</u> are a short duration of moderate snowfall. Some accumulation is possible. <h3>Ice</h3> <p>Explain that heavy accumulations of ice can disrupt communications and power for days while utility companies repair extensive damage. Even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.</p>
 <p>Ice</p> <ul style="list-style-type: none">• Sleet• Freezing rain• Ice storm <p>FEMA CERT Basic Training Unit 1: Winter Storms W-5</p> <p>Display Slide W-5</p>	<p>Define the different kinds of ice:</p> <ul style="list-style-type: none">▪ <u>Sleet</u>: Raindrops that freeze into ice pellets before reaching the ground are called sleet. Sleet usually bounces when hitting a surface and does not stick to objects. Sleet, however, can accumulate like snow and cause a hazard to motorists.▪ <u>Freezing rain</u>: Rain that falls onto surfaces with temperatures below freezing—causing it to freeze to those surfaces is called freezing rain. Even small accumulations of ice can cause a significant hazard.▪ <u>Ice storm</u>: Ice storms occur when freezing rain falls and freezes immediately on impact. Communications and power can be disrupted for days.

COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Winter Flooding</p> <ul style="list-style-type: none">Coastal floodsIce jamsSnowmelt <p>FEMA CERT Basic Training Unit 1: Winter Storms W-6</p>	<h3>Winter Flooding</h3> <p>Explain that winter storms can generate flooding, resulting in significant damage and loss of life.</p> <p>Point out that winter flooding includes:</p> <ul style="list-style-type: none"><u>Coastal floods</u>: Winds generated from intense winter storms can cause widespread tidal flooding and severe beach erosion along coastal areas.<u>Ice jams</u>: Long cold spells can cause rivers and lakes to freeze. A rise in the water level or a thaw breaks the ice into large chunks that become jammed at manmade and natural obstructions. An ice jam can act as a dam, resulting in severe flooding.<u>Snowmelt</u>: A sudden thaw of a heavy snow pack that often leads to flooding.
<p>Display Slide W-6</p>	
 <p>Cold</p> <ul style="list-style-type: none">WindchillFrostbiteHypothermia <p>FEMA CERT Basic Training Unit 1: Winter Storms W-7</p>	<h3>Cold</h3> <p>Point out that exposure to cold can cause frostbite or hypothermia and become life threatening. Infants and the elderly are the most susceptible.</p> <p>Tell the group that what constitutes extreme cold varies in different parts of the country:</p> <ul style="list-style-type: none"><u>In the south</u>, near-freezing temperatures are considered extreme cold. Vegetation may be damaged and pipes may freeze and burst.<u>In the north</u>, extreme temperatures are well below zero.
<p>Display Slide W-7</p>	

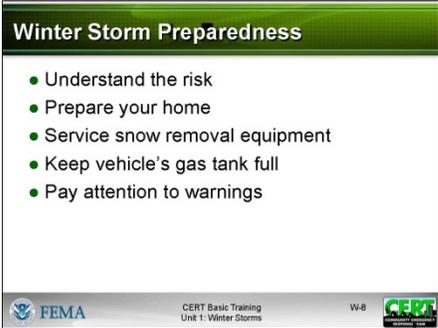
**COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS**

INSTRUCTOR GUIDANCE	CONTENT
	<p>Tell the group that, when talking about cold, they should consider:</p> <ul style="list-style-type: none">▪ <u>Wind chill</u>: Wind chill is not the actual temperature, but rather how wind and cold feel on exposed skin. As the wind increases, heat is carried away from the body at a faster rate, driving down the body's temperature. ▪ <u>Frostbite</u>: Frostbite is damage to body tissue caused by extreme cold and resulting in a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes, or the tip of the nose. Frostbite victims require immediate medical treatment. If you must wait for help, slowly rewarm the affected areas. If signs of hypothermia appear, however, warm the body core before the extremities. ▪ <u>Hypothermia</u>: Hypothermia occurs when the body temperature drops below 95 degrees Fahrenheit. Hypothermia can kill. For those who survive, there are likely to be lasting kidney, liver, and pancreas problems. If you suspect hypothermia, take the person's temperature. If it is below 95 degrees Fahrenheit, seek medical care immediately! If medical care is not available, warm the person slowly, starting with the body core. Warming the arms and legs first drives cold blood toward the heart and can lead to heart failure. Dress the person in dry clothing and wrap him or her in a warm blanket, covering the head and neck. Do not provide alcohol, drugs, coffee, or any hot beverage or food. Warm broth is the first food to offer.

COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>	<p>Warning signs of hypothermia include:</p> <ul style="list-style-type: none">▪ Uncontrollable shivering▪ Memory loss▪ Disorientation▪ Incoherence▪ Slurred speech▪ Drowsiness▪ Apparent exhaustion <p>Remind the group that the National Weather Service (NWS) Storm Prediction Center issues watches and warnings of hazardous weather, including winter storms.</p> <p>What is the difference between a Winter Storm Watch and a Winter Storm Warning?</p> <p>Explain that:</p> <ul style="list-style-type: none">▪ A <u>watch</u> is issued when winter storm conditions are possible within the next 36-48 hours. Citizens should prepare for hazardous weather at this time.▪ A <u>winter weather advisory</u> is issued when a low pressure system produces a combination of winter weather that presents a hazard, but not enough to warrant a winter storm warning.▪ A <u>warning</u> is issued when life-threatening severe winter conditions have begun or will begin within 24 hours. Citizens should put their preparations into action at this time. <p>Tell the group that a <u>blizzard warning</u> means sustained winds or frequent gusts of 35 miles per hour or greater and considerable falling or blowing snow (reducing visibility to less than a quarter mile) are expected to last for a period of 3 hours or longer.</p>

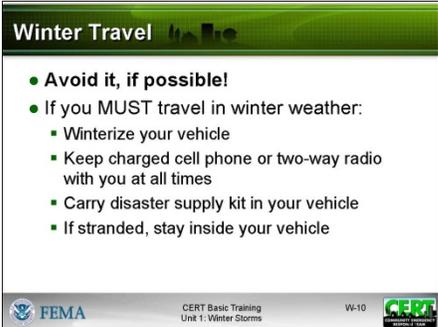
COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Display Slide W-8</p>	<p>Winter Storm Preparedness</p> <p>How can you prepare for winter storms?</p> <p>Display the slide and emphasize key steps in winter storm preparedness:</p> <ul style="list-style-type: none">▪ <u>Understand the risk.</u> Take time to learn about the winter storm risk in your area. Realize the seriousness of such storms; they may leave you on your own for a long period of time.▪ <u>Prepare your home</u> with insulation, caulking, and weatherstripping. Learn how to keep pipes from freezing and how to thaw frozen pipes. Store sufficient fuel (or emergency heating equipment). Install and test smoke alarms on all levels of your home. Contact your local utility company about conducting an energy audit. Most will perform a basic audit free of charge.▪ <u>Service snow removal equipment</u> before the winter storm season. Maintain the equipment in good working order, and ensure that you have an adequate supply of gas. Clearing snow can be dangerous; use caution!▪ <u>Keep your car's gas tank full</u> for emergency use and to keep the fuel line from freezing.▪ <u>Pay attention to warnings.</u> Use a NOAA Weather Radio with a tone-alert feature or listen to local radio or television for Emergency Alert System (EAS) broadcasts.

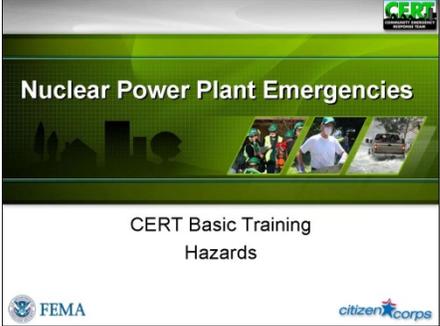
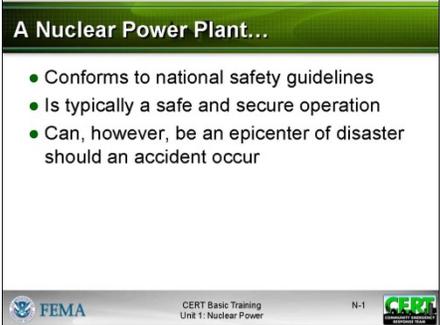
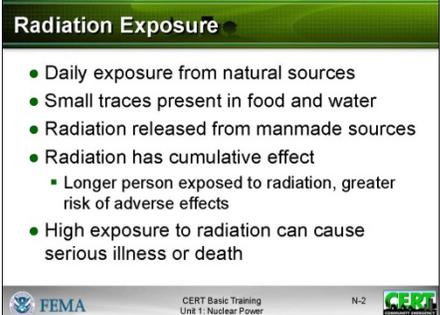
COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 338 315 407"></p> <p data-bbox="240 443 643 512">Allow the participants time to respond.</p> <div data-bbox="240 554 675 877"><p data-bbox="250 569 480 594">During a Winter Storm</p><ul data-bbox="266 621 623 726" style="list-style-type: none">• Stay indoors and dress warmly• Eat and drink regularly• Conserve fuel• If outside, protect yourself from hazards<p data-bbox="250 852 672 877"> CERT Basic Training Unit 1: Winter Storms W-9 </p></div> <p data-bbox="240 919 505 951">Display Slide W-9</p>	<p data-bbox="706 331 1365 363">What should you do <u>during</u> a winter storm?</p> <p data-bbox="706 554 1511 623">Summarize the discussion using the information from the slide below. Be sure to make the following points:</p> <ul data-bbox="706 646 1511 1640" style="list-style-type: none">▪ <u>Stay indoors and dress warmly.</u> Wear layers of loose-fitting, lightweight, warm clothing. When necessary, remove layers to avoid perspiration and subsequent chill.▪ <u>Eat and drink regularly.</u> Food provides the body with energy for producing its own heat. Drink liquids such as warm broth or juices to prevent dehydration. <u>Avoid caffeine and alcohol.</u> Caffeine, a stimulant, accelerates the symptoms of hypothermia. Alcohol is a depressant and hastens the effects of cold on the body. Alcohol also slows circulation and can make you less aware of the effects of cold. Both caffeine and alcohol can cause dehydration.▪ <u>Conserve fuel.</u> Great demand may be placed on electric, gas, and other fuel distribution systems (fuel oil, propane, etc.). Suppliers may not be able to replenish depleted supplies during severe weather. Lower the thermostat to 65 degrees Fahrenheit during the day and 55 degrees at night. Close off unused rooms, stuff towels or rags in cracks under doors, and cover windows at night.▪ <u>If outside, protect yourself from hazards.</u> Dress warmly, keep dry, and watch for signs of hypothermia and frostbite. Avoid overexertion. Walk carefully when on snowy, icy sidewalks, and use public transportation, if possible.

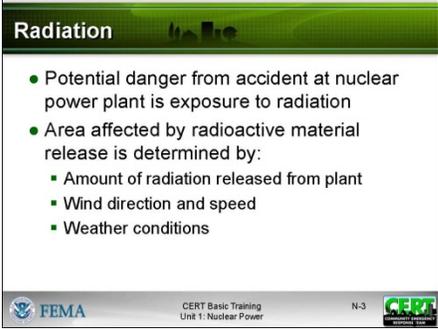
COMMUNITY EMERGENCY RESPONSE TEAM
WINTER STORMS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 405 675 732"><p>Winter Travel</p><ul style="list-style-type: none">● Avoid it, if possible!● If you MUST travel in winter weather:<ul style="list-style-type: none">▪ Winterize your vehicle▪ Keep charged cell phone or two-way radio with you at all times▪ Carry disaster supply kit in your vehicle▪ If stranded, stay inside your vehicle<p>FEMA CERT Basic Training Unit 1: Winter Storms W-10</p></div> <p data-bbox="237 772 521 804">Display Slide W-10</p> 	<p data-bbox="704 331 909 363">Winter Travel</p> <p data-bbox="704 407 1474 438">DO NOT travel if advised against it or if not necessary.</p> <p data-bbox="704 480 1442 583">Suggest that the participants also take measures to protect themselves if they must drive during a winter storm:</p> <ul data-bbox="704 606 1503 1396" style="list-style-type: none">▪ <u>Winterize your car before the winter storm season.</u> Have a mechanic check your car's systems and install good winter tires with adequate tread. Keep snow and ice removal equipment in the car.▪ <u>Keep a cell phone or two-way radio with you when traveling in winter weather.</u> Make sure that the batteries are charged.▪ <u>Keep a disaster supplies kit in the trunk of each car used by household members.</u>▪ <u>Plan long trips carefully and notify someone of your destination, route, and expected time of arrival.</u>▪ <u>If you get stuck,</u> stay with the vehicle, display a trouble sign, and <u>occasionally</u> run the engine to keep warm, keeping the exhaust pipe clear of snow and a downwind window open slightly for ventilation. Use available material, such as newspapers, maps, and removable car mats for added insulation. Avoid overexertion, drink fluids, and watch for signs of frostbite and hypothermia. Venturing away from your vehicle can be very disorientating in a severe storm! <p data-bbox="704 1419 1430 1522">Caution the participants to check the forecast when venturing outside. Major winter storms are often followed by even colder temperatures.</p> <p data-bbox="704 1566 1500 1669">Keep children indoors during the most severe part of the storm. If allowed to play outdoors during the storm, be sure to check on them frequently.</p> <p data-bbox="704 1713 1490 1780">Does anyone have additional questions, comments, or concerns about winter storms?</p>

Nuclear Power Plant Emergencies

INSTRUCTOR GUIDANCE	CONTENT
 <p>The slide features a green header with the title "Nuclear Power Plant Emergencies" and a small CERT logo. Below the header is a collage of images showing people in various settings, including a person in a hard hat and another in a lab coat. The text "CERT Basic Training Hazards" is centered below the images. Logos for FEMA and citizen*corps are at the bottom.</p>	<p><i>Introduction</i></p> <p>Explain that the construction and operation of nuclear power plants are closely monitored and regulated by the Nuclear Regulatory Commission (NRC). The Federal Emergency Management Agency (FEMA) also regulates emergency planning requirements for nuclear power plants. However, accidents at these plants are possible.</p>
<p>Display Slide N-0</p>  <p>The slide has a green header with the title "A Nuclear Power Plant...". The main content is a bulleted list: "Conforms to national safety guidelines", "Is typically a safe and secure operation", and "Can, however, be an epicenter of disaster should an accident occur". Logos for FEMA, CERT, and the text "CERT Basic Training Unit 1: Nuclear Power N-1" are at the bottom.</p>	<p>Point out that an accident could result in dangerous levels of radiation that could affect the health and safety of the public living near the nuclear power plant.</p>
<p>Display Slide N-1</p>  <p>The slide has a green header with the title "Radiation Exposure". The main content is a bulleted list: "Daily exposure from natural sources", "Small traces present in food and water", "Radiation released from manmade sources", "Radiation has cumulative effect" (with a sub-bullet "Longer person exposed to radiation, greater risk of adverse effects"), and "High exposure to radiation can cause serious illness or death". Logos for FEMA, CERT, and the text "CERT Basic Training Unit 1: Nuclear Power N-2" are at the bottom.</p>	<p><i>What is Radiation?</i></p> <p>Explain that radioactive materials are composed of unstable atoms. These atoms give off excess energy until they become stable. The energy emitted is <u>radiation</u>.</p>
<p>Display Slide N-2</p>	<p>Point out that each of us is exposed daily to radiation from natural sources, including the sun and the Earth. Small traces of radiation are present in food and water. Radiation also is released from manmade sources, such as x-ray machines, television sets, and microwave ovens.</p>

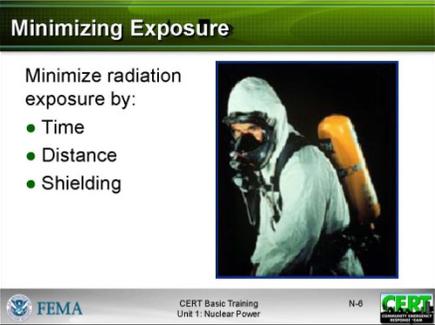
**COMMUNITY EMERGENCY RESPONSE TEAM
NUCLEAR POWER PLANT EMERGENCIES**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 695 675 1024"><p>Radiation</p><ul style="list-style-type: none">● Potential danger from accident at nuclear power plant is exposure to radiation● Area affected by radioactive material release is determined by:<ul style="list-style-type: none">▪ Amount of radiation released from plant▪ Wind direction and speed▪ Weather conditions<p>FEMA CERT Basic Training Unit 1: Nuclear Power N-3</p></div> <p>Display Slide N-3</p>	<p>Continue by explaining that nuclear power plants use the heat generated from nuclear fission in a contained environment to convert water to steam, which powers generators to produce electricity.</p> <p>Stress that <u>radiation has a cumulative effect</u>. The longer a person is exposed to radiation, the greater the risk of adverse effects. A high exposure to radiation can cause serious illness or death.</p> <p>Emphasize that the <u>potential danger from an accident at a nuclear power plant is exposure to radiation</u>. This exposure could come from the release of radioactive material from the plant into the environment, usually characterized by a plume (cloud-like) formation of radioactive gases and particles.</p> <p>Point out that the area affected by radioactive material release is determined by:</p> <ul style="list-style-type: none">▪ The amount of radiation released from the plant.▪ Wind direction and speed.▪ Weather conditions.

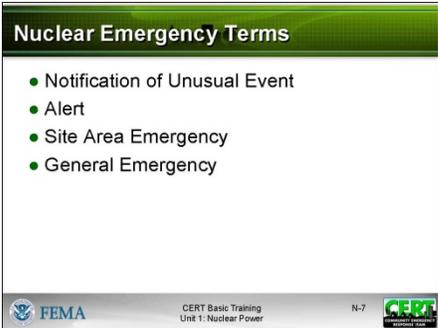
COMMUNITY EMERGENCY RESPONSE TEAM
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INSTRUCTOR GUIDANCE	CONTENT
<p>Major Hazards</p> <ul style="list-style-type: none">Major hazards to people in the vicinity of the plume<ul style="list-style-type: none"><u>Radiation exposure</u> to the body<u>Inhalation</u> of radioactive materials<u>Ingestion</u> of radioactive materials <p>FEMA CERT Basic Training Unit 1: Nuclear Power N-4</p> <p>Display Slide N-4</p>	<p>Hazards</p> <p>Describe the major hazards to people in the vicinity of the radiation plume:</p> <ul style="list-style-type: none"><u>Radiation exposure</u> to the body from the cloud and particles deposited on the ground.<u>Inhalation</u> of radioactive materials.<u>Ingestion</u> of radioactive materials. <p>Emphasize that if an accident occurred involving a radioactive material release at a nuclear power plant, local authorities would:</p> <ul style="list-style-type: none">Activate warning sirens or another approved alert method.Provide instructions through the Emergency Alert System (EAS) on local television and radio stations.
<p>Emergency Planning Zones</p> <ul style="list-style-type: none">EPZ within a <u>10-mile radius</u> of the plant<ul style="list-style-type: none">Possible that people could be harmed by direct radiation exposureEPZ within <u>50-mile radius</u> from the plant<ul style="list-style-type: none">Radioactive materials could contaminate water supplies, food crops, and livestock <p>FEMA CERT Basic Training Unit 1: Nuclear Power N-5</p> <p>Display Slide N-5</p>	<p>Emergency Planning Zones</p> <p>Tell the group that local and State governments, Federal agencies, and the electric utilities have emergency response plans in the event of a nuclear power plant emergency. The plans define two Emergency Planning Zones (EPZs).</p> <p>Explain the EPZs to the participants:</p> <ul style="list-style-type: none">One EPZ covers an area within a <u>10-mile radius</u> of the plant where it is possible that <u>people could be harmed by direct radiation exposure</u>.The other EPZ covers a broader area, usually up to a <u>50-mile radius</u> from the plant, where <u>radioactive materials could contaminate water supplies, food crops, and livestock</u>.

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INSTRUCTOR GUIDANCE	CONTENT
 <p>Allow the participants time to respond.</p>  <p>Display Slide N-6 http://www.osha.gov/SLTC/etools/ics/images/respирator_01.jpg</p>	<h3><i>Minimizing Radiation Exposure</i></h3> <p>What are the three ways to minimize radiation exposure?</p> <p>Use the slide to discuss the ways to minimize radiation exposure. Tell the participants that exposure can be minimized by:</p> <ul style="list-style-type: none">▪ <u>Time</u>. Limit your time exposed to radioactive material. Most radioactivity loses its strength fairly quickly. In a nuclear power plant accident, local authorities will monitor any release of radiation and determine when the threat has passed.▪ <u>Distance</u>. The more distance between you and the source of the radiation, the better. In a serious nuclear power plant accident, local authorities will call for an evacuation to increase the distance between you and the radiation. (Evacuation also reduces the period of time of exposure.)▪ <u>Shielding</u>. The more heavy and dense material between you and the source of the radiation, the better. This is why local authorities could advise you to remain indoors if an accident occurs. In some cases, the walls in your home would be sufficient shielding to protect you.

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INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide N-7</p> <p>Discuss any sections of your local government's EOP that may apply to nuclear power plant emergencies.</p>	<h3><i>Nuclear Emergency Terms</i></h3> <p>Emphasize the importance of knowing the terms that are used to describe nuclear emergencies:</p> <ul style="list-style-type: none">▪ <u>Notification of Unusual Event</u>: A small problem has occurred at the plant. No radiation material release is expected. Federal, State, and county officials will be told right away. No action on your part will be necessary.▪ <u>Alert</u>: A small problem has occurred, and small amounts of radiation material could leak inside the plant. This will not affect you, and you should not have to do anything.▪ <u>Site Area Emergency</u>: A more serious problem has occurred, and small amounts of radiation material could leak from the plant. If necessary, State and county officials will act to assure public safety. Area sirens may be sounded. Listen to your radio or television for safety information.▪ <u>General Emergency</u>: This is the most serious problem. Radiation material could leak outside the plant and off the plant site. The sirens will sound. Tune to your local radio or television station for emergency information reports. State and county officials will act to protect the public. Be prepared to follow instructions promptly.

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INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 331 316 403"></p> <p data-bbox="240 405 646 476">Allow the participants time to respond</p> <div data-bbox="240 552 675 877"><p data-bbox="248 569 477 594">During an Emergency</p><ul data-bbox="264 621 646 726" style="list-style-type: none">• Listen to warning• Stay tuned to local radio or television• Evacuate, if advised to do so• If not advised to evacuate, shelter in place<p data-bbox="240 848 675 877"> CERT Basic Training Unit 1: Nuclear Power N-8 </p></div> <p data-bbox="240 913 462 942">Display Slide N-8</p>	<p data-bbox="706 327 1442 367"><i>During a Nuclear Power Plant Emergency</i></p> <p data-bbox="706 401 1463 472">What are measures that you can take if you hear a warning?</p> <p data-bbox="706 554 1227 583">Be sure to make the following points:</p> <ul data-bbox="706 606 1503 1854" style="list-style-type: none">▪ <u>Listen to the warning.</u> Not all incidents result in the release of radiation. The incident could be contained inside the plant and pose no danger to the public.▪ <u>Stay tuned to local radio or television.</u> Local authorities will provide specific information and instructions.<ul data-bbox="755 858 1503 1178" style="list-style-type: none">• The advice given will depend on the nature of the emergency, how quickly it is evolving, and how much radiation, if any, is likely to be released.• Local instructions should take precedence over any advice given on national broadcasts or in books.• Review the public information materials that you received from the power company or government officials.▪ <u>Evacuate, if you are advised to do so.</u><ul data-bbox="755 1272 1503 1482" style="list-style-type: none">• Close and lock doors and windows.• Keep car windows and vents closed. Use recirculated air.• Listen to the radio for evacuation routes and other instructions.▪ If you are not advised to evacuate, <u>shelter in place.</u><ul data-bbox="755 1556 1503 1854" style="list-style-type: none">• Close doors and windows.• Turn off the air-conditioner, ventilation fans, furnace, and other air intakes.• Go to a basement or other underground area if possible.• Keep a battery-powered radio with you at all times.

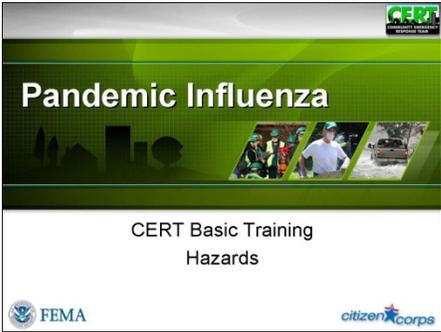
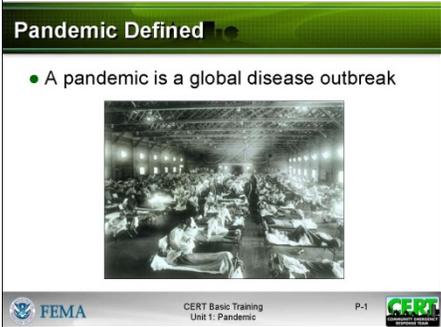
**COMMUNITY EMERGENCY RESPONSE TEAM
NUCLEAR POWER PLANT EMERGENCIES**

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 338 673 667"> <p>During an Emergency</p> <ul style="list-style-type: none"> ● Shelter livestock; give them stored feed ● Do not use telephone ● If you suspect exposure, shower thoroughly <ul style="list-style-type: none"> ■ Change clothes and shoes ■ Put exposed clothing in plastic bag ■ Seal bag, and place it out of way ● Put food in covered containers   </div> <p>Display Slide N-9</p> <div data-bbox="240 1024 316 1100">  </div> <p>Allow the participants time to respond.</p> <div data-bbox="240 1352 673 1682"> <p>After an Emergency</p> <ul style="list-style-type: none"> ● If told to evacuate, return home only when local authorities say that it safe ● If advised to stay in home, remain inside ● Get medical treatment for any unusual symptoms   </div> <p>Display Slide N-10</p>	<p>Continue with the following points:</p> <ul style="list-style-type: none"> ■ <u>Shelter livestock and give them stored feed</u>, if time permits. ■ <u>Do not use the telephone unless it is absolutely necessary.</u> Lines will be needed for emergency calls. ■ <u>If you suspect exposure, shower thoroughly.</u> <ul style="list-style-type: none"> ● Change clothes and shoes. ● Put exposed clothing in a plastic bag. ● Seal the bag, and place it out of the way. ■ <u>Put food in covered containers or in the refrigerator.</u> Food not previously covered should be washed before being put in containers. <p><i>After a Nuclear Power Plant Emergency</i></p> <p>What should you do <u>after</u> a nuclear power plant emergency?</p> <p>Summarize the discussion using the information from the slides that follow.</p> <p>Emphasize the following points:</p> <ul style="list-style-type: none"> ■ If told to evacuate, <u>return home only when local authorities say that it safe</u> to do so. ■ <u>If advised to stay in the home</u>, remain inside until local authorities indicate that it is safe. ■ <u>Get medical treatment</u> for any unusual symptoms, such as the rapid onset of vomiting that may be related to radiation exposure.

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INSTRUCTOR GUIDANCE	CONTENT
	<p>Does anyone have additional questions, comments, or concerns about nuclear power plant emergencies?</p>

Pandemic Influenza

INSTRUCTOR GUIDANCE	CONTENT
 <p>Display Slide P-0</p>	<p><i>Pandemic Influenza</i></p> <p>Introduce the topic by defining pandemic.</p> <ul style="list-style-type: none">▪ A pandemic is a global disease outbreak <p>Explain that pandemics are characterized by the sudden onset of an extremely virulent pathogen with potentially lethal results. Though historically pandemics have been caused by a wide variety of diseases, today influenza poses the greatest risk to reach pandemic proportions.</p>
 <p>Display Slide P-1</p>	<p>Remind participants that pandemic influenza differs from seasonal influenza.</p> <p>Say that, while the threat of a global flu pandemic is relatively remote, preparedness is essential to managing a pandemic.</p>

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 438 678 768"><p>Community Preparedness and Risk</p><ul style="list-style-type: none">• A community strategy can significantly delay or reduce impact of a pandemic• A pandemic is likely to occur at least once every century<p>FEMA CERT Basic Training Unit 1: Pandemic P-2</p></div> <p data-bbox="237 785 496 821">Display Slide P-2</p> <div data-bbox="237 1337 678 1667"><p>Assessing the Risk</p><ul style="list-style-type: none">• Groups most susceptible to pandemic:<ul style="list-style-type: none">▪ Infants▪ Adults with autoimmune diseases▪ Elderly<p>FEMA CERT Basic Training Unit 1: Pandemic P-3</p></div> <p data-bbox="237 1684 496 1719">Display Slide P-3</p>	<p data-bbox="704 373 1243 409">Pandemic Flu and Your Community</p> <p data-bbox="704 443 1511 621">Stress that, like any other community-wide disaster, the most important step in pandemic flu preparedness is to have a sound plan. Research and experience has shown that the implementation of a community strategy can significantly delay or reduce the impact of a pandemic.</p> <p data-bbox="704 640 1484 783">Indicate to the participants that it is the job of your local community to establish a sound plan to enact in the event of pandemic. Individuals can, however, help by preparing in their homes and workplaces.</p> <p data-bbox="704 856 1000 892">Assessing the Risk</p> <p data-bbox="704 926 1503 1140">Explain that the likelihood of a pandemic influenza event occurring is nearly impossible to predict with any certainty. Hindsight indicates that a pandemic is likely to occur at least once every century, although recent advances in medicine may decrease that statistic in the future.</p> <p data-bbox="704 1163 1511 1306">Remind the group that, regardless of the statistical likelihood, almost all competent sources suggest that the practical likelihood of pandemic flu occurring in the future is approaching 100 percent.</p> <p data-bbox="704 1341 1511 1446">Indicate that, historically, pandemics tend to have the greatest affect on the members of society with weakened immune systems. Those groups include:</p> <ul data-bbox="704 1465 1227 1608" style="list-style-type: none">▪ Infants▪ Adults with autoimmune diseases▪ Elderly

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INSTRUCTOR GUIDANCE	CONTENT
<p>The “Pandemic Influenza Storybook” is a resource of narratives from survivors, families, and friends who experienced the 1918 and 1957 pandemics. The online narratives are available at www.pandemicflue.gov/storybook/introduction.</p> <div data-bbox="237 1251 678 1583" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Essential Services Disrupted</p> <ul style="list-style-type: none"> ● Services may be limited or non-existent: <ul style="list-style-type: none"> ■ Hospitals and other healthcare facilities ■ Banks ■ Restaurants ■ Government offices ■ Telephone and cellular phone companies ■ Post offices <p style="font-size: small; margin-top: 5px;">  CERT Basic Training P-4  </p> </div> <p>Display Slide P-4</p>	<p>Explain that the Great Influenza Pandemic of 1918 was an exception to this general rule. In the 1918 event, the virus proved most deadly to the young adult population. There is no sure understanding of why this was so, but it serves as an apt reminder that an influenza pandemic is unpredictable and can affect anyone and everyone in a given population.</p> <p>Tell participants that the next section will cover individual and family preparedness.</p> <p><i>Personal and Family Preparedness</i></p> <p>Tell the group that, though relatively unlikely, should a pandemic occur, individuals should be aware of and prepared for widespread effects. Like many disasters, a flu pandemic would alter many aspects of society and would drastically influence how the world operates.</p> <p>Essential Services Disrupted</p> <p>Explain that they should plan for the possibility that usual services may be disrupted. These could include services provided by:</p> <ul style="list-style-type: none"> ■ Hospitals and other healthcare facilities ■ Banks ■ Restaurants ■ Government offices ■ Telephone and cellular phone companies ■ Post offices

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 1381 678 1711" data-label="Image"> </div> <p data-bbox="237 1728 495 1766">Display Slide P-5</p>	<p data-bbox="706 373 1055 411">Provide these examples:</p> <ul style="list-style-type: none"> <li data-bbox="706 426 1510 499">▪ Stores may close or have limited supplies. Make sure you have your disaster supply kit ready! <li data-bbox="706 514 1510 625">▪ Transportation services may be disrupted and you may not be able to rely on public transportation. Plan to take fewer trips and store essential supplies. <li data-bbox="706 657 1510 835">▪ Public gatherings, such as volunteer meetings and worship services, may be canceled. Prepare contact lists including conference calls, telephone chains, and email distribution lists to access or distribute necessary information. <li data-bbox="706 867 1429 940">▪ The ability to travel, even by car if there are fuel shortages, may be limited. <li data-bbox="706 972 1510 1119">▪ You may not be able to communicate with family and loved ones. You should also talk to your family about where family members and loved ones will go in an emergency and how they will receive care. <li data-bbox="706 1150 1510 1297">▪ In a pandemic, there may be widespread illness that could result in the shut down of local ATMs and banks. Keep a small amount of cash or traveler's checks in small denominations for easy use. <p data-bbox="706 1381 1226 1419">Access to Food and Water Limited</p> <p data-bbox="706 1434 1510 1581">Remind the participants that, in a disaster environment, food and water are often the most vulnerable to failure and are often the first supplies to be depleted. A pandemic event would be no different.</p> <p data-bbox="706 1602 1510 1780">Explain that, to prepare for the possibility that access to fresh food and water may be limited, the Centers for Disease Control and Prevention (CDC) recommends keeping a two-week supply of non-perishable food and water available at all times.</p>

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 380 678 709"> <p>Potable Water Access Limited</p>  <ul style="list-style-type: none"> • How to prepare: <ul style="list-style-type: none"> ▪ Store two weeks of water <ul style="list-style-type: none"> ◆ 1 gallon of water per person per day ◆ Avoid using containers that will decompose or break <p>FEMA CERT Basic Training Unit 1: Pandemic P-6</p> </div> <p>Display Slide P-6</p>	<p><u>Food</u></p> <ul style="list-style-type: none"> ▪ Store two weeks of non-perishable food. <ul style="list-style-type: none"> • Select foods that do not require refrigeration, preparation (including the use of water), or cooking. ▪ Ensure that formulas for infants and any child's or older person's special nutritional needs are a part of your planning. <p><u>Water</u></p> <ul style="list-style-type: none"> ▪ Store two weeks of water. <ul style="list-style-type: none"> • 1 gallon of water per person per day (2 quarts for drinking, 2 quarts for food preparation/sanitation), in clean plastic containers. • Avoid using containers that will decompose or break, such as plastic milk jugs or glass bottles.
<div data-bbox="240 1346 678 1675"> <p>Pandemic and the Workplace</p> <ul style="list-style-type: none"> • Ask your employer how business will continue <ul style="list-style-type: none"> ▪ Discuss staggered shifts or working at home ▪ Discuss on-site daycare ▪ Discuss possible flexibility in leave policies ▪ Discuss how much leave you can take to care for yourself or a family member • Plan for possible loss of income <p>FEMA CERT Basic Training Unit 1: Pandemic P-7</p> </div> <p>Display Slide P-7</p>	<p>Pandemic and the Workplace</p> <p>Provide these tips for preparing for pandemic in your workplace:</p> <ul style="list-style-type: none"> ▪ Ask your employer how business will continue during a pandemic. <ul style="list-style-type: none"> • Discuss staggered shifts or working at home with your employer. • Discuss telecommuting possibilities and needs, accessing remote networks, and using portable computers. • Discuss the possibility of on-site daycare if needed and not already available

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 1121 678 1451" data-label="Image"> </div> <p data-bbox="237 1465 496 1503">Display Slide P-8</p>	<ul style="list-style-type: none"> ▪ Discuss possible flexibility in leave policies. Discuss with your employer how much leave you can take to care for yourself or a family member. <ul style="list-style-type: none"> • Plan for possible loss of income if you are unable to work or the company you work for temporarily closes. <p data-bbox="704 695 1247 730">Pandemic Preparedness in Schools</p> <p data-bbox="704 764 1524 1087">Explain to the group that schools, including public and private preschool, childcare, trade schools, and colleges and universities, may be closed to limit the spread of flu in the community and to help prevent children from becoming sick. Other school-related activities and services could also be disrupted or cancelled including: clubs, sports/sporting events, music activities, and school meals. School closings would likely happen very early in a pandemic and could occur on short notice.</p> <p data-bbox="704 1125 1524 1192">Provide these examples of ways to prepare for extended school closures:</p> <ul style="list-style-type: none"> ▪ Talk to teachers, administrators, and parent-teacher organizations about your school's pandemic plan, and offer your help. ▪ Plan now for children staying at home for extended periods of time, as school closings may occur along with restrictions on public gatherings, such as at malls and movie theaters. ▪ Plan home learning activities and exercises that your children can do at home. Have learning materials, such as books, school supplies, and educational computer activities and movies on hand.

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 1058 678 1388" data-label="Image"> </div> <p data-bbox="237 1402 495 1440">Display Slide P-9</p>	<ul style="list-style-type: none"> <li data-bbox="706 380 1502 558">▪ Talk to teachers, administrators, and parent-teacher organizations about possible activities, lesson plans, and exercises that children can do at home if schools are closed. This could include continuing courses by TV or the Internet. <li data-bbox="706 594 1481 737">▪ Plan entertainment and recreational activities that your children can do at home. Have materials, such as reading books, coloring books, and games, on hand for your children to use. <p data-bbox="706 772 1169 810"><i>Prevention and Treatment</i></p> <p data-bbox="706 846 1458 1024">Explain that the best ways to prevent and mitigate an outbreak of pandemic flu are to stay healthy and be prepared. The previous topic covered how individuals might prepare for the possibility of a pandemic event. This topic will discuss ways to stay healthy.</p> <p data-bbox="706 1060 1469 1129">Tell the participants that these steps may help prevent the spread of respiratory illnesses such as the flu:</p> <ul style="list-style-type: none"> <li data-bbox="706 1150 1502 1255">▪ Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue away immediately after you use it. <li data-bbox="706 1276 1481 1419">▪ Wash your hands often with soap and water, especially after you cough or sneeze. If you are not near water, use an alcohol-based (60-95%) hand cleaner. <li data-bbox="706 1440 1485 1545">▪ Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too. <li data-bbox="706 1566 1474 1671">▪ If you get the flu, stay home from work, school, and social gatherings. In this way you will help prevent others from catching your illness. <li data-bbox="706 1692 1469 1761">▪ Try not to touch your eyes, nose, or mouth. Germs often spread this way.

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 438 678 768"><p>Potential Treatments</p><ul style="list-style-type: none">● Current pandemic flu treatments are limited:<ul style="list-style-type: none">■ Vaccination■ Antiviral medication<p>FEMA CERT Basic Training Unit 1: Pandemic P-10</p></div> <p>Display Slide P-10</p>	<p>Vaccination</p> <p>Remind the group that vaccines are used to protect people from contracting a virus once a particular threat is identified.</p> <ul style="list-style-type: none">■ After an individual has been infected by a virus, a vaccine generally cannot help to combat it.■ Unfortunately, a specific pandemic influenza vaccine cannot be produced until a particular pandemic influenza virus emerges and is identified.■ Once a pandemic influenza virus has been identified, it will likely take 4-6 months to develop, test, and begin producing a vaccine. <p>Explain that the supply of pandemic vaccine will be limited, particularly in the early stages of a pandemic.</p> <ul style="list-style-type: none">■ Efforts are being made to increase vaccine-manufacturing capacity in the United States so that supplies of vaccines would be more readily available.■ In addition, research is underway to develop new ways to produce vaccines more quickly. <p>Tell the group that, while promising for future use, a vaccine cure-all for pandemic influenza is still many years away.</p>

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 1150 678 1480" data-label="Image"> </div> <p data-bbox="237 1497 509 1535">Display Slide P-11</p>	<p data-bbox="704 380 1008 411">Antiviral Medication</p> <p data-bbox="704 449 1435 552">Inform the group that the Federal Food and Drug Administration (FDA) has approved several antiviral medications to treat seasonal influenza.</p> <ul data-bbox="704 575 1500 856" style="list-style-type: none"> ▪ Such medications may be effective in mitigating the impact and spread of a pandemic influenza virus. ▪ With little awareness of how a pandemic flu virus will look and act, the success of using these antivirals is difficult to predict. ▪ Doctors and experts in the community warn that their effect may be moderate to minimal. <p data-bbox="704 877 1458 947">Explain that these antivirals are currently available by prescription only.</p> <p data-bbox="704 1087 1192 1119">Get Informed and Stay Informed</p> <p data-bbox="704 1157 1403 1297">Tell the group that knowing the facts is the best preparation. Identify sources you can count on for reliable information. If a pandemic occurs, having accurate and reliable information will be critical.</p> <ul data-bbox="704 1318 1511 1675" style="list-style-type: none"> ▪ Reliable, accurate, and timely information is available at www.pandemicflu.gov. ▪ Another source for information on pandemic influenza is the Centers for Disease Control and Prevention (CDC) Hotline at 1-800-CDC-INFO (1-800-232-4636). ▪ Look for information on your local and state government Web sites. Links are available to each state department of public health at www.pandemicflu.gov.

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PANDEMIC INFLUENZA**

INSTRUCTOR GUIDANCE	CONTENT
\	<ul style="list-style-type: none">▪ Listen to local and national radio, watch news reports on television, and read your newspaper and other sources of printed and web-based information.▪ Talk to your local health care providers and public health officials. <p>Does anyone have any questions about pandemic influenza?</p>

