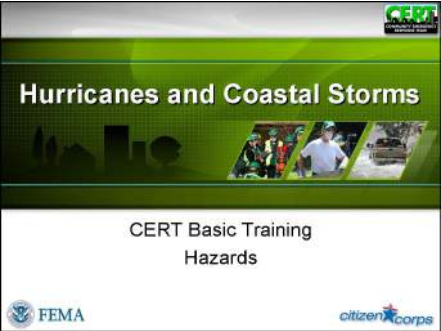

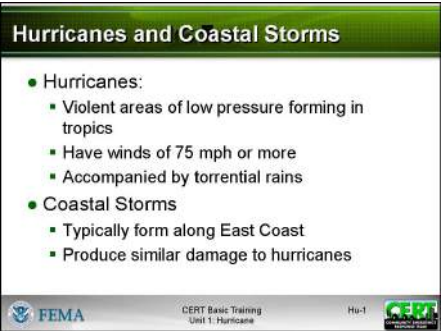
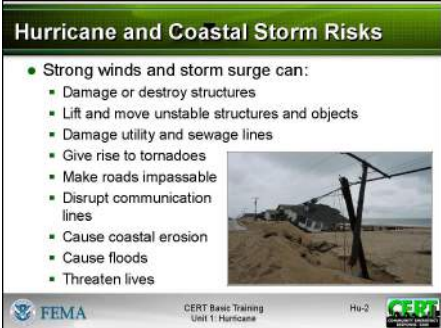



# Hurricanes and Coastal Storms

INSTRUCTOR GUIDANCE	CONTENT
 <p><b>Display Slide Hu-0</b></p>  <p>Allow the participants time to respond before displaying the slide.</p>  <p><b>Display Slide Hu-1</b></p>	<p><b><i>Hurricanes and Coastal Storms</i></b></p> <p><b>What is the difference between a hurricane and a coastal storm?</b></p> <p><b>Hurricanes</b></p> <p>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>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**

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INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="235 388 673 714"></div> <p data-bbox="235 751 516 787"><b>Display Slide Hu-2</b></p> <div data-bbox="235 1222 673 1549"></div> <p data-bbox="235 1587 516 1623"><b>Display Slide Hu-3</b></p> <p data-bbox="235 1696 414 1732"><b>PM, P. Hu-2</b></p>	<h3 data-bbox="706 357 1242 388"><b>Hurricane and Coastal Storm Risks</b></h3> <p data-bbox="706 430 1469 499">Explain that hurricanes and coastal storms pose a risk because powerful winds and storm surges can:</p> <ul data-bbox="706 520 1396 1024" style="list-style-type: none"><li>▪ Damage or destroy structures</li><li>▪ Lift and move unstable structures and objects</li><li>▪ Damage utility and sewage lines</li><li>▪ Give rise to tornadoes</li><li>▪ Cause coastal erosion</li><li>▪ Cause floods</li><li>▪ Threaten lives</li><li>▪ Make roads impassable</li><li>▪ Disrupt communication lines, including 911</li><li>▪ Overwhelm first responders</li></ul> <p data-bbox="706 1045 1502 1150">The accompanying heavy rains can inundate coastal areas and inland communities, presenting another risk to life and property.</p> <h3 data-bbox="706 1192 1177 1224"><b>Saffir-Simpson Hurricane Scale</b></h3> <p data-bbox="706 1266 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**


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<b>INSTRUCTOR GUIDANCE</b>	<b>CONTENT</b>
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<b>PM, P. Hu-2</b>	<b>Hurricane Classifications</b>
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<b>Category</b>	<b>Barometric Pressure (Inches)</b>	<b>Windspeed (Miles Per Hour)</b>	<b>Storm Surge (Feet)</b>
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><b>Statistics</b></p> <ul style="list-style-type: none"><li>• 100 million Americans are at risk for hurricanes</li><li>• Almost 14 million live in area where winds greater than 125 mph have been recorded (i.e., tip of Florida to North Carolina coast)</li><li>• More than 6 million live in storm surge areas</li></ul> <p>FEMA CERT Basic Training Unit 1: Hurricane Hu-4</p> <p><b>Display Slide Hu-4</b></p>  <p>Allow the group time to respond.</p>	<p><b>Frequency of Hurricanes</b></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><b>Statistics</b></p> <p>Stress that nearly 100 million Americans are at risk from hurricanes. Specifically:</p> <ul style="list-style-type: none"><li>▪ 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).</li><li>▪ More than 6 million live in storm surge areas.</li></ul> <p>Emphasize that, although deaths from hurricanes are decreasing as hurricane warning systems improve, property damage is on the rise.</p> <p><b>Preparing for a Hurricane or Coastal Storm</b></p> <p><b>How can you prepare for a hurricane or coastal storm?</b></p>

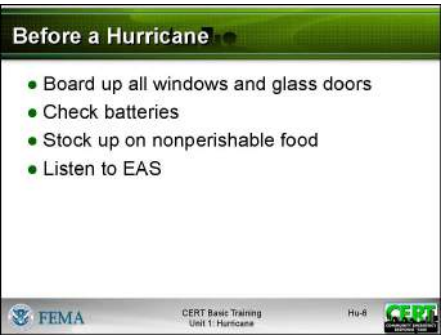
**COMMUNITY EMERGENCY RESPONSE TEAM  
HURRICANES AND COASTAL STORMS**

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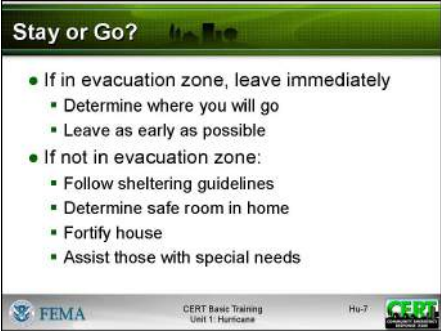

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="240 331 673 661"><p><b>Preparing for a Hurricane</b></p><ul style="list-style-type: none"><li>● Know risk and evacuation routes</li><li>● Develop action plan</li><li>● Secure needed supplies</li><li>● Floodproof property</li><li>● Create personal disaster supply kit for your family</li><li>● Secure mobile homes</li></ul><p>FEMA CERT Basic Training Unit 1: Hurricane Hu-5</p></div> <p data-bbox="240 693 516 730"><b>Display Slide Hu-5</b></p>	<p data-bbox="706 367 1502 514">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 data-bbox="706 556 1477 661">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 data-bbox="706 661 1404 703">Describe for the group the following preparations:</p> <ul data-bbox="706 714 1510 1554" style="list-style-type: none"><li>▪ <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.</li><li>▪ <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.</li><li>▪ <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.</li></ul>



COMMUNITY EMERGENCY RESPONSE TEAM  
HURRICANES AND COASTAL STORMS


INSTRUCTOR GUIDANCE	CONTENT
 <p><b>Display Slide Hu-6</b></p>	<p><b>Before a Hurricane</b></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"><li>▪ <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.</li><li>▪ <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.</li><li>▪ <u>Stock up on nonperishable food.</u> A 3-day supply of food and water for each family member is a must.</li><li>▪ <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.</li></ul>

COMMUNITY EMERGENCY RESPONSE TEAM  
HURRICANES AND COASTAL STORMS



INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 331 675 659"></div> <p data-bbox="237 695 516 730"><b>Display Slide Hu-7</b></p> <div data-bbox="237 1566 315 1635"></div> <p data-bbox="237 1671 618 1776">Allow the group to respond before displaying the next slide.</p>	<p data-bbox="706 331 1049 367"><b>Deciding to Stay or Go</b></p> <p data-bbox="706 407 1511 512">If you are in an evacuation zone, <b>LEAVE IMMEDIATELY</b>. As CERT members, you set the example for your community.</p> <p data-bbox="706 552 1008 588">If you are evacuating:</p> <ul data-bbox="706 606 1511 911" style="list-style-type: none"><li>▪ <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.</li><li>▪ <u>Leave as early as possible</u>.</li></ul> <p data-bbox="706 968 1511 1003">If you are NOT in an evacuation zone and decide to stay:</p> <ul data-bbox="706 1022 1511 1503" style="list-style-type: none"><li>▪ <u>Follow the sheltering guidelines</u>.</li><li>▪ <u>Determine a safe room in your home</u>.</li><li>▪ <u>Fortify your house</u>. Consult <a href="http://www.flash.org">www.flash.org</a> for information on window protection, garage door protection, roof protection, and door protection. Secure outdoor items that could be blown away and cause damage.</li><li>▪ <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.</li></ul> <p data-bbox="706 1560 1317 1596"><b>What should you do <u>during</u> a hurricane?</b></p>



COMMUNITY EMERGENCY RESPONSE TEAM  
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<div data-bbox="237 331 675 659"><p><b>During a Hurricane</b></p><ul style="list-style-type: none"><li>• Stay indoors</li><li>• Stay away from flood waters</li><li>• Be aware of the “eye”</li><li>• Be alert for tornadoes</li></ul><p>FEMA CERT Basic Training Unit 1: Hurricane Hu-8</p></div> <p data-bbox="237 695 516 730"><b>Display Slide Hu-8</b></p> <p data-bbox="237 768 675 1419">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> <div data-bbox="237 1503 315 1577"></div> <p data-bbox="237 1614 618 1717">Allow the group to respond before displaying the next slide.</p>	<p data-bbox="706 331 993 367"><b>During a Hurricane</b></p> <p data-bbox="706 407 1500 478">Allow the group time to respond. Then, summarize their responses using the slide.</p> <p data-bbox="706 518 1127 554">Be sure to make these points:</p> <ul data-bbox="706 573 1500 1444" style="list-style-type: none"><li>▪ <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.</li><li>▪ If advised to take shelter:<ul data-bbox="755 821 1479 1031" style="list-style-type: none"><li>• Take the family disaster supply kit.</li><li>• Go to an interior “safe” room without windows, if possible.</li><li>• Stay in the safe room and listen to EAS for additional instructions.</li></ul></li><li>▪ <u>Stay away from flood waters.</u> If the home begins to flood, go to a higher level, if possible.</li><li>▪ <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.</li><li>▪ <u>Be alert for tornadoes.</u> Tornadoes are frequently associated with hurricanes, and are most common in the right-front quadrant of the storm.</li></ul> <p data-bbox="706 1503 1484 1572"><b>What precautions should you take <u>after</u> a hurricane or coastal storm?</b></p>

COMMUNITY EMERGENCY RESPONSE TEAM  
HURRICANES AND COASTAL STORMS

INSTRUCTOR GUIDANCE	CONTENT
<p data-bbox="240 342 487 373"><b>After a Hurricane</b></p> <ul data-bbox="259 394 633 609" style="list-style-type: none"><li>• Do not reenter area until it is declared safe</li><li>• Use flashlight to inspect for damage</li><li>• Wear protective clothing, sunscreen, and bug repellent</li><li>• Check on neighbors</li><li>• If you use a generator, take safety precautions</li><li>• Stay away from downed power lines</li><li>• Turn off utilities, if necessary</li><li>• Listen to EAS</li></ul> <p data-bbox="240 625 673 661"> CERT Basic Training Unit 1: Hurricane Hu-9 </p> <p data-bbox="240 688 516 724"><b>Display Slide Hu-9</b></p>	<p data-bbox="706 331 966 367"><b>After a Hurricane</b></p> <p data-bbox="706 405 1128 441">Be sure to make these points:</p> <ul data-bbox="706 457 1510 1522" style="list-style-type: none"><li>▪ <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.</li><li>▪ <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.</li><li>▪ <u>Wear protective clothing, sunscreen, and bug repellent.</u></li><li>▪ <u>Be aware that lost pets may be scared and more inclined to bite.</u></li><li>▪ <u>Be aware of traffic hazards.</u> Do not drive through flooded areas. Watch for traffic signals that may be out of service.</li><li>▪ <u>Check on neighbors.</u></li><li>▪ <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.</li><li>▪ <u>Stay away from downed power lines.</u> The only sure way to limit risk from downed power lines is to avoid them completely.</li></ul>



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