

Safety Circular

June 1, 2021

Prepare for Hurricane Season

June 1-November 30

Hurricanes are among nature's most powerful and destructive phenomena. Over a typical 2-year period, the U.S. coastline is struck by an average of 3 hurricanes, 1 of which is classified as a major hurricane (winds of 111 mph or greater). By knowing what actions to take before the hurricane season begins, when a hurricane approaches, and when the storm is in your area, as well as what to do after a hurricane leaves your area, you can increase your chance of

Hurricane Hazards:

While hurricanes pose the greatest threat to life and property, tropical storms and depression also can be devastating. The primary hazards from tropical cyclones (which include tropical depressions, tropical storms, and hurricanes) are storm surge flooding, inland flooding from heavy rains, destructive winds, tornadoes, and high surf and rip currents.

Storm surge is the abnormal rise of water and large waves produced by hurricanes pose the greatest threat to life and property along the coast. Storm surge can reach heights well over 20 feet and can span hundreds of miles of coastline.

Storm Tide is the water level rise during a storm due to the combination of storm surge and the astronomical tide. The destructive power of storm surge and large battering waves can result in loss of life, buildings destroyed, beach and dune erosion and road and bridge damage along the coast. Storm surge can travel several miles inland. In estuaries and bayous, salt water intrusion endangers public health and the environment.

Flooding- Tropical cyclones often produce widespread, torrential rains in excess of 6 inches, which may result in deadly and destructive floods. In fact, flooding is the major threat from tropical cyclones for people living inland. Flash flooding, defined as a rapid rise in water levels, can occur quickly due to intense rainfall. Longer term flooding on rivers and streams can persist for several days after the storm.

When approaching water on a roadway, always remember Turn Around Don't Drown. Rainfall amounts are not directly related to the strength of tropical cyclones but rather to the speed and size of the storm, as well as the geography of the area. Slower moving and larger storms produce more rainfall. In addition, mountainous terrain enhances rainfall from a tropical cyclone.

High Winds- Tropical storm-force winds are strong enough to be dangerous to those caught in them. For this reason, emergency managers plan on having their evacuations complete and their personnel sheltered *before* the onset of tropical storm-force winds, not hurricane-force winds. Hurricane-force winds, 74 mph or more, can destroy buildings and mobile homes. Debris, such as signs, roofing material, siding and small items left outside become flying missiles during hurricanes. Winds can stay above hurricane strength well inland.

Rip Currents- The strong winds of a tropical cyclone can cause dangerous waves that pose a significant hazard to mariners and coastal residents and visitors. When the waves break along the coast, they can produce deadly rip currents - even at large distances from the storm. Rip currents are channeled currents of water flowing away from shore, usually extending past the line of breaking waves, that can pull even the strongest swimmers away from shore.

Saffir-Simpson Hurricane Wind Scale

Category	Sustained Wind
1	74-95mph, 64-82kt
2	96-110mph, 83-95kt
3	111-129mph, 96-112kt
4	130-156mph, 113-136kt
5	157+mph, 137+kt

The Saffir-Simpson Hurricane Wind Scale

A 1 to 5 rating based only on a hurricane's maximum sustained wind speed. This scale does not take into account other potentially deadly hazards such as storm surge, rainfall flooding, and tornadoes.

The Saffir-Simpson Hurricane Wind Scale estimates potential property damage. While all hurricanes produce life-threatening winds, hurricanes rated Category 3 and higher are known as major hurricanes*. Major hurricanes can cause devastating to catastrophic wind damage and significant loss of life simply due to the strength of their winds. Hurricanes of all categories can produce deadly storm surge, rain-induced floods, and tornadoes. These hazards require people to take protective action, including evacuating from areas vulnerable to storm surge.

Determine Your Risk & Prepare:

It is important to understand what types of wind and water hazards could occur where you live, and to start preparing how to handle them. Find out if you live in a hurricane evacuation zone. If you do, now is the time to begin planning where you would go and how you would get there. If you live in a well-built home outside the evacuation zone, your safest place may be to remain home. Be sure to account for your pets in your plan. As hurricane season approaches, listen to local officials on questions related to how you may need to adjust any evacuation plans based on the latest health and safety guidelines from the CDC and your local officials.

Types of Damage Due to Hurricane Winds

Category 1: Very dangerous winds will produce some damage. Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.

Category 2: Extremely dangerous winds will cause extensive damage. Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.

Category 3: Devastating damage will occur. Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.

Category 4: Catastrophic damage will occur. Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Category 5: Catastrophic damage will occur. A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Surviving the Storm

If you plan to ride out the storm in your home, make sure it is in good repair and up to local hurricane building code specifications. Have the proper plywood, steel or aluminum panels to board up the windows and doors. Remember, the garage door is the most vulnerable part of the home, so it must be able to withstand the winds.

You're going to need supplies not just to get through the storm but for the potentially lengthy and unpleasant aftermath. Have enough non-perishable food, water and medicine to last each person in your family a minimum of three days. Electricity and water could be out for at least that long. You'll need extra cash, a battery-powered radio and flashlights. You may need a portable crank or solar-powered USB charger for your cell phones.

Safety Circular

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The Safety Circular, a publication of the Texas Department of Criminal Justice Risk Management Department, is published monthly in an effort to promote and enhance risk management awareness on issues relating to TDCJ employees. Design and layout of the Safety Circular is performed by Kim Roberson, Risk Management. Comments, suggestions and safety related items are welcome.

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References: ♦ tdcj.texas.gov ♦ weather.gov ♦ cdc.gov ♦ nhc.noaa.gov

Clean Up

Cleaning up your home can be a big job. Be sure to pace yourself. Clean up and dry your home quickly after the storm or flood ends- within 24 to 48 hours if possible to prevent mold growth. Never turn power on or off or use an electric tool or appliance while standing in water.

Stay away from any damaged buildings or structures until a building inspector or other government authority has had a chance to examine it and certify that it's safe. Wait until daylight to return to buildings so it's easier to see and avoid any hazards- especially if the power is out.

Floodwater can contain dangerous bacteria from overflowing sewage and agricultural and industrial waste. While skin contact with floodwater doesn't pose a serious health risk by itself, eating or drinking anything contaminated with floodwater can cause diseases.

Wear protective clothing and gear!

