



## Hurricane

In the U.S., the hurricane season runs from the first of June until the end of November. However, hurricanes have occurred in every month of the year throughout all the tropical regions of the world. They are called typhoons in the Western Pacific, cyclones in the Indian Ocean and Southern Pacific, and sometimes Willy-Willys in Australia. Surviving the wrath of these killer storms lies in education and preparation.

According to FEMA, 10 tropical storms on average develop over the Atlantic Ocean, Caribbean Sea or Gulf of Mexico. About 6 of these typically strengthen enough to become hurricanes. Many of these remain over the ocean with little or no impact on the continental U.S. However, about 5 hurricanes strike the U.S. coastline every 3 years. Of these 5, 2 will be major hurricanes measuring a Category 3 or higher [defined as having winds above 111 miles per hour (mph)] on the Saffir-Simpson Scale. These storms can end up costing our nation millions, if not billions, of dollars in damages.

This year in 2020, the prediction is for 13-16 named storms, with 8 hurricanes, with 4 being major category 3-5 storms. This season has already had 3 named storms before June 10. Now is the time to prepare before the major storms hit. Even has hurricanes move inland and lose some of their strength, strong winds and heavy amounts of rain can still cause problems with flash flooding, downed power wires and debris scattered all around.



## STAGES OF HURRICANE DEVELOPMENT

- **Tropical Waves:** the first step toward a hurricane. They are areas of low pressure that lack a closed center of circulation. About 100 of these develop each year in the Atlantic Ocean.
- **Tropical Depressions:** occur when a tropical wave develops a closed low-level circulation and wind speeds in excess of 20 knots, or 25 mph.

- **Tropical Storms:** develop when a tropical depression has sustained wind speeds of 35 knots, or 39 mph.
- **Hurricanes:** develops when a tropical storm has sustained wind speeds of 65 knots, or 74 mph.

## HURRICANE EFFECTS

- **Rain:** Probably the most underrated of all effects from a tropical storm or hurricane. Amounts can be as high as several feet.
- **Wind:** The next most devastating effect behind storm surge; hurricanes can have winds up to and above 200 mph.
- **Tornadoes:** Many do not realize it, but hurricanes can produce tornadoes upon landfall. The friction between the storm and land produces a great deal of instability and, thus, tornadoes.
- **Storm Surge:** a rise in the sea level caused by strong winds. This rising dome of water that accompanies a hurricane at landfall is the most deadly effect from these killer storms. Storm surges account for about 90% of all hurricane deaths.

## HURRICANE/TROPICAL STORM WATCHES AND WARNINGS

- **Watch:** Hurricane/tropical storm conditions are possible in the specified area, usually within 48 hours. Tune to NOAA Weather Radio, commercial radio or television for information.
- **Warning:** Hurricane/tropical storm conditions are expected in the specified area, usually within 36 hours.

## HURRICANE FORCE CATEGORIES

Hurricanes are classified into 5 categories based on their wind speed, central pressure and damage potential. Category 3 and higher hurricanes are considered major hurricanes, though Categories 1 and 2 are still extremely dangerous and warrant your full attention.

## **STORM SURGE**

The greatest killer of people and the most destructive companion of hurricanes is the storm surge. A storm surge is a dome of water pushed ashore by powerful hurricane winds. A storm surge is not gradual; it rushes in and out, sweeping anything not secure back out to sea. In Hurricane Katrina, residents of coastal Mississippi were caught off-guard by storm surge flood waters. Entire buildings were moved and some of the people who didn't evacuate remain among the missing.

## **OTHER HAZARDS**

High winds, flooding, secondary hazards (e.g., tornadoes, power outages, water contamination, dam failure).

## **TO PREPARE FOR A HURRICANE, TAKE THE FOLLOWING MEASURES:**

- Make plans to secure your property. Permanent storm shutters offer the best protection for windows. A second option is to board up windows with 5/8" marine plywood, cut to fit and ready to install. Tape does not prevent windows from breaking.
- Install straps or additional clips to securely fasten your roof to the frame structure. This will reduce roof damage.
- Be sure trees and shrubs around your home are well-trimmed.
- Clear loose and clogged rain gutters and downspouts.
- Determine how and where to secure your boat.
- Consider building a safe room.

## **IF A HURRICANE IS IN YOUR AREA:**

- Listen to the radio or TV for information.
- Secure your home, close storm shutters, and secure outdoor objects or bring them indoors.
- Turn off utilities if instructed to do so. Otherwise, turn the refrigerator thermostat to its coldest setting and keep its doors closed.
- Turn off propane tanks.

- Avoid using the phone, except for serious emergencies.
- Moor your boat if time permits.
- Ensure a supply of water for sanitary purposes, such as cleaning and flushing toilets. Fill the bathtub and other large containers with water.

#### **EVACUATE UNDER THE FOLLOWING CONDITIONS:**

- If you are directed by local authorities to do so. Be sure to follow their instructions.
- If you live in a mobile home or temporary structure - such shelters are particularly hazardous during hurricanes no matter how well-fastened to the ground.
- If you live in a high-rise building - hurricane winds are stronger at higher elevations.
- If you live on the coast, on a floodplain, near a river, or on an inland waterway.
- If you feel you are in danger.
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#### **IF YOU ARE UNABLE TO EVACUATE, GO TO YOUR SAFE ROOM. IF YOU DO NOT HAVE ONE, FOLLOW THESE GUIDELINES:**

- Stay indoors during the hurricane and away from windows and glass doors.
- Close all interior doors - secure and brace external doors.
- Keep curtains and blinds closed. Do not be fooled if there is a lull because it could be the eye of the storm and winds will pick up again.
- Take refuge in a small interior room, closet or hallway on the lowest level.
- Lie on the floor under a table or another sturdy object.

#### **RECOVERY ACTIONS**

- When the winds stop, there is still danger from the storm. Downed power lines, gas leaks and debris can make your neighborhood and yard a danger zone.
- Take the time to assess the situation.

- Act carefully and with safety as your priority. More people are killed during recovery than during hurricanes.

If you have evacuated and are returning home, wait until you are told it is safe to re-enter your neighborhood.

For what supplies to have, see [Ready.gov](https://www.ready.gov/emergency-supply-list) Emergency Supply List