

Hurricane Basics

Hurricanes are massive, spinning storms that develop over warm ocean waters and sometimes strike land. A wall of water called a storm surge is pushed ashore by the storm that can feature winds nearing 200 miles per hour.

Hurricanes cause major damage due to flooding and wind, and can leave lasting effects on residential and commercial areas for years to come.

Little is known as to how or why hurricanes actually form, but scientists do know that warm water and steady wind speeds are two main contributors. The National Aeronautics and Space Administration (NASA) reports that warm ocean waters, usually at least 79 degrees Fahrenheit, provide the energy to turn a storm into a hurricane.

DIFFERENT CATEGORIES

Hurricanes are separated into 5 different categories depending on their speeds. Here is a look at these classifications and related wind speeds, provided by NASA.

- **Category 1:** Winds of 74-95 miles per hour. These speeds are faster than the fastest land animal, the cheetah.
- **Category 2:** Winds of 96-110 miles per

hour. Faster than a professional baseball pitcher's fastball.

- **Category 3:** Winds of 111-129 miles per hour. Close to the serving speed of some professional tennis players.

- **Category 4:** Winds of 130-156 miles per hour. Quicker than the world's fastest roller coaster.

- **Category 5:** Wind of 157 miles per hour or higher. Close to the rate of high-speed trains.

Knowing these intense wind speeds makes it easy to understand what a hurricane is capable of and why you should be prepared.

PARTS OF A HURRICANE

These devastating storms are comprised of three main components, each featuring different weather conditions.

- The eye is at the center of the storm. You can easily identify it in satellite pictures as a hole around which the clouds seem to be rotating. You might find it hard to believe, but

the eye is usually very calm. It is typically partly cloudy within the eye, but sometimes even clear.

- The thunderstorms that swirl around the eye are known as the eye wall. Here is where the winds and rainfall are heaviest.

- Extending from the eye wall are the rain bands. These incredible spiral bands of clouds, rain and thunderstorms can extend for hundreds of miles and might even contain tornadoes.

NAMING HURRICANES

It is not uncommon for more than one hurricane to disrupt the ocean at one time. That is one reason they are distinguished by names.

The World Meteorological Organization maintains and updates six different lists of names that are rotated each year. If a hurricane causes significant damage or fatalities, the name is replaced on the list.

Preparing Your Home

Chances are, if experts are proclaiming an evacuation due to the threat of a hurricane, you will be leaving your home behind. Waiting it out is never a good idea; the storm may hit your home whether you're inside or not.

Instead, be proactive in taking measures to protect your home before a hurricane arrives.

MAKE SURE INSURANCE POLICIES ARE SECURE

Each year, talk to your insurance agent to ensure your policy covers the full cost of rebuilding if your home is destroyed in a storm.

Experts at the Insurance Information Institute recommend annual inquiries, as building costs are constantly rising. Make sure your home is not just covered for its value but its rebuild value.

FLOOD INSURANCE

Most insurance companies don't cover flooding as a part of their regular policies. While damage caused by winds may be covered, you need to find a suitable insurance agency to acquire flood insurance. Consult the National Flood Insurance Program to be referred to an agency in your area.

ENFORCE ROOF INTEGRITY

Your roof should be exceptionally secure if you live in an area that experiences hurricanes. Consider it the largest potential opening of your home. Inspect your roof to make sure all shingles are properly secured and in place. Ask a local contractor about sealing your roof deck to add extra protection.

SEAL WINDOWS AND DOORS

Make sure all windows and doors are properly sealed to prevent water from entering. Rain is blown around so fiercely during a hurricane that if there



is a weak spot in your home, it will find it. Add extra caulking to seals that appear to be damaged from warm-weather conditions.

REMOVE LAWN FURNITURE

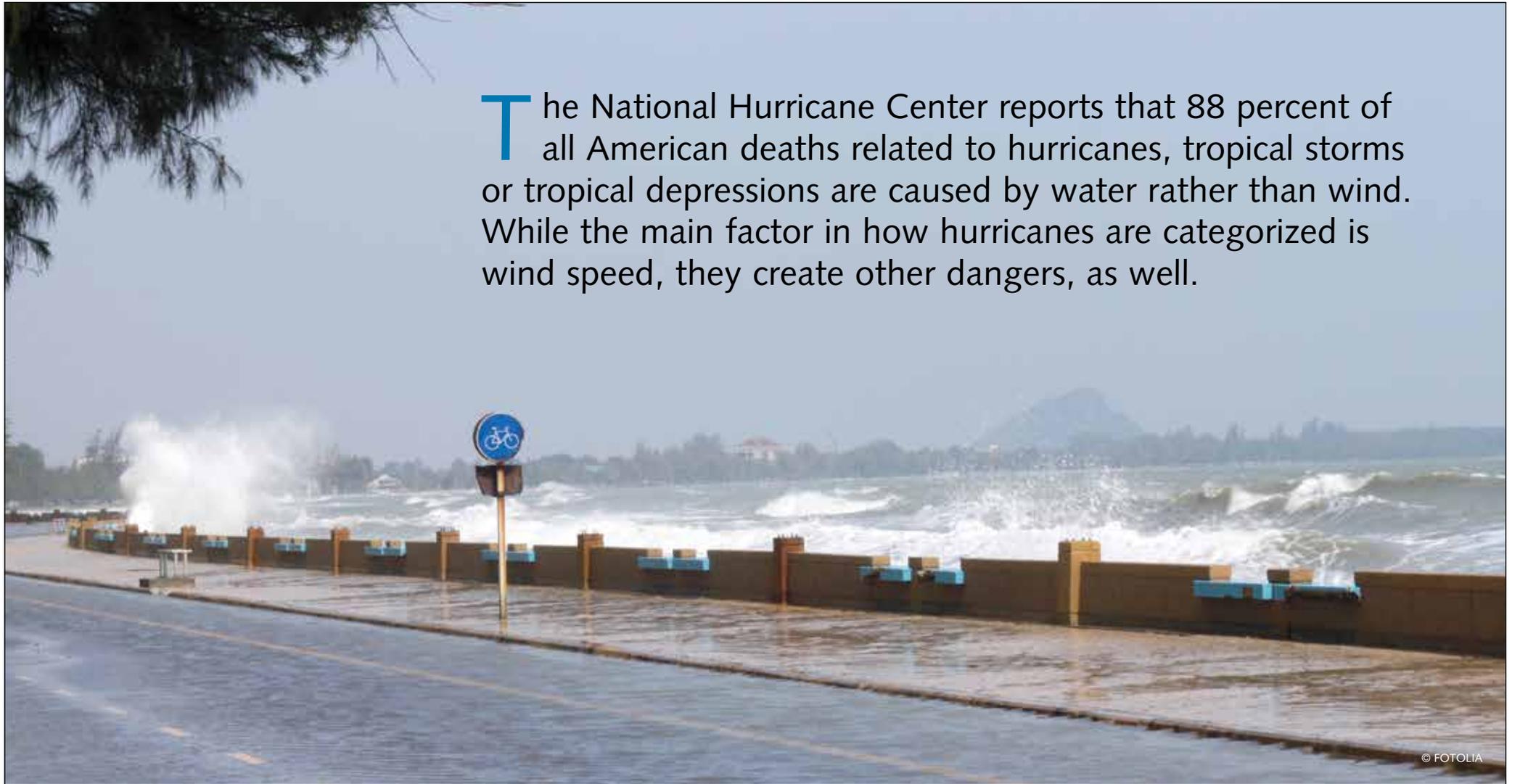
Anything lying around in your yard should be considered dangerous during

a hurricane. Strong winds can easily launch lawn furniture or grills through windows. Make sure items as small as garden decorations are stored properly or secured to the ground.

ROOF STRAPS

To add even more security to your

roof, consider installing roof straps. Some states already require builders to secure the home's roof to its walls with metal straps. Installation can be performed on a home that is already established. If you have an attic, it can be a cheaper and easier job for a contractor.



The National Hurricane Center reports that 88 percent of all American deaths related to hurricanes, tropical storms or tropical depressions are caused by water rather than wind. While the main factor in how hurricanes are categorized is wind speed, they create other dangers, as well.

Hurricane Hazards

Learn about the different dangers you should prepare for if you ever experience a hurricane. The National Oceanic and Atmospheric Administration has laid out a few of the most common hazards created by hurricanes.

STORM SURGE

A storm surge is an abnormal rise of water created by a storm's winds. A storm surge can cause sea levels to rise over 20 feet tall and can span hundreds of miles.

The larger the hurricane, the greater the surge. NOAA states that storm surge is by far the greatest threat to life and property along coastlines. It can travel several miles inland, creating real health conditions by introducing salt water to land.

TIDE

Another type of rising water is called the storm tide. It is created by the storm surge and astronomical tide to add more height to the storm surge.

When these ingredients are combined with high winds, a coastline is an extremely dangerous place to be.

FLOODING

According to NOAA, flooding is the major threat hurricanes pose to people living inland. Intense rainfall mixed with storm surges can quickly cause flash flooding. Rivers and streams can remain at extremely high levels for several days after the initial storm.

WINDS

Hurricane-force winds begin at 74 miles per hour and can have disastrous effects on structures. These intense winds can turn any loose items into flying missiles to create even more damage. That is why it's important to remove items from your yard if you are facing a hurricane threat.

TORNADOES

There may be several tornadoes created by a hurri-

cane's rotation.

The good news is that these tornadoes are usually weak and short-lived, but they still should be considered a threat.

RIP CURRENTS

The winds created by hurricanes can create waves that can be dangerous to coastal properties and mariners. Rip currents are channeled currents flowing away from the shore past the breaking waves.

Watch or Warning

Hurricanes usually give Americans plenty of time to prepare for the worst. Knowing the right time to leave your home is crucial to surviving a hurricane. If experts declare a hurricane warning in your area, it is best to use your evacuation plan.

As with any other storm, meteorologists spend countless hours researching hurricanes' paths and warning residents. You have an advantage when it comes to planning for hurricanes due to the length of time they spend building strength before they make landfall.

A great way to stay up to date on hurricane activity is by using a National Oceanic and Atmospheric Administration weather radio. These devices allow you to stay on top of National Weather Service broadcasts covering watches, warnings or other alerts. The NWS recommends devices that are certified to Public Alert standards.

You may consider using a battery-operated radio. Whether it requires replaceable or rechargeable batteries, be sure you have extras in case electricity is unavailable due to the storm.

The National Oceanic and Atmospheric Administration has reported on the criteria experts use to determine whether a hurricane watch or warning is necessary.

HURRICANE WATCH

A tropical storm featuring sustained winds of 74 miles per hour or greater mean the storm can be labeled a hurri-



cane. Experts will declare a hurricane watch when these conditions are expected to be possible in a specified area. Watches are declared 48 hours in advance of the anticipated arrival time of these intense

winds in an area.

A hurricane watch gives you the opportunity to review your evacuation plan and make sure you have ample supplies in case you decide to stay home during the storm.

HURRICANE WARNING

Since evacuations and other maneuvers can be difficult to execute in windy conditions, hurricane warnings are issued with 36 hours of anticipated arrival time. Officials may then

choose to order an evacuation.

You should have a plan for shelter and know the safest route to get there, and have enough food and other supplies to last while you are away.

Evacuating

Preparation is your first line of defense against the threat of a hurricane. Knowing where you will go and how you'll get there is crucial when you are under a mandatory evacuation. Don't take the chance of forgetting important items by being in a rush to get out of town.

If hurricane conditions are serious enough, your local officials may declare a mandatory evacuation. You should already have a concrete plan dedicated to how you will gather your family and supplies and arrive at your safe place. Ready.gov recommends choosing several destinations in different directions in case one route is deemed unsafe to travel.

PLANNING FOR AN EVACUATION

Before an evacuation is a possibility, it is important to have plenty of supplies in a place. The United States Coast Guard recommends having these items ready.

- **Drinking water:** Bring at least one gallon per person in unbreakable containers. You should have additional water for food preparation, sanitation and your pets. Water should be rotated each year to reduce chances of disease.

- **Non-perishable food:** Stock at least three to seven days of food for each member of your family. Some good items to bring along are canned meats, raw vegetables, peanut butter and high-energy foods, such as granola bars.

- **First aid kit:** This bundle should include bandages, gloves, anti-bacterial ointments and important medi-



cations.

Even if you have a safe place to which you can go, you never know what might happen along the way during hurricane conditions. It is important to have medical necessities available in case

you get sidetracked.

IN THE CAR

It is important to keep plenty of gasoline available during times where a hurricane evacuation is expected. Keep a full tank of gas in case you need to

leave. This is important because fueling stations might have a hard time keeping up with demand during these times.

Know the routes you will take. Research alternative routes in case traffic is congested.

Leaving early enough might help you avoid running into congestion on your preferred route.

If you do not have a car, it is crucial to make plans with a friend or family member to go along with them.

Returning Home

Coming home after a hurricane evacuation comes with its own set of complications. Witnessing the destruction caused to your home or community can be a tough situation to process. Don't let your emotions get the best of you. You must take precautions before entering your home.

Wild animals might be present in an area that has been ravaged by a natural disaster. Their natural habitat might have also been compromised, meaning they will be searching for a new place to call home. Make sure you use extreme caution when approaching any animal after a storm.

OUTSIDE YOUR HOME

Before entering, check the perimeter for potentially dangerous conditions. You should look for loose power lines, gas leaks and any structural damage to your home.

Before sorting through debris outside your home, use a stick or pole to rummage through the pile. This is an effective way to scare poisonous snakes away before reaching your hand into the debris.

Never enter your home if you smell gas, floodwaters are near the structure or authorities have not declared it safe after fire or major structural damage.

ENTERING YOUR HOME

Once you have ensured the exterior of your home is in good shape, you can begin the journey inside. Ready.gov lists some crucial things to watch for once you're indoors.



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- **Natural gas:** If the smell of gas is present or you hear a hissing sound, leave the building immediately. If accessible, you can turn off the main gas valve from outdoors. Call the gas company once you are safely away from the home.

- **Wiring:** Inspect your home's electrical system

before turning on lights. Look for sparks or exposed wires. If you don't feel safe using electricity, contact an electrician to ensure everything is working properly.

- **Appliances:** If your home experienced any flooding, appliances that are in contact with water should be unplugged, after you shut off

the main breaker. Once they have dried out, a professional should inspect them before use.

- **Basement:** If you have a basement, it should be inspected for floodwaters. If flooded, the water in the basement should be gradually pumped outdoors. If the outside ground is still water-

logged, there is a chance your home's walls could collapse while water is pumped out .

Make sure to document any damage caused to the interior or exterior of your home. Most insurance companies will require photographs of damage that required attention before they could do an inspection.



Recovering Emotionally

Dealing with the stress of experiencing and recovering from a hurricane can be devastating. Sometimes the emotional effects are harder to overcome than the financial burden of property damage or loss.

Witnessing a disaster can cause many different emotions to spin out of control. You may experience a level of anxiety concerning your safety, or grief and anger. Ready.gov states that focusing on your strengths and abili-

ties will help you overcome these emotional challenges.

DEALING WITH STRESS

Recovering from the events of a disaster will take time, but there are many things you can do to speed up the process. Be proactive about your mental health by following these tips from Ready.gov:

- **Never bottle your feelings.** It is important to express yourself with friends or family. It is likely they are dealing with the same emotions. Talking about it will help both parties heal.

- **Seeking the help of a professional can give you a new perspective.** Crisis counselors are highly trained experts in dealing with post-disaster stress.

- **Focusing on your physical and mental health is a beneficial way to keep your mind off the disaster.**

Exercise regularly and maintain a healthy diet to promote healing.

- **Never hold yourself responsible for the hurricane or the damage it caused.** It can sometimes be overwhelming if you think you could have done more to prevent the damages incurred.

CHILDREN IN CRISIS

Young children are especially prone to developing emotional problems after a hurricane. These dangerous storms can cause terror, confusion and insecurity. Be sure to talk to your children about the event and answer any questions they have.

You should know that your children

are likely reacting the same way you are. Be strong when discussing the events with your children. Remember, they will look to you for security and support.

Involving your child when creating your family's safety plan will give them a sense of confidence if the plan ever needs to be utilized. The disaster won't seem as surprising if a child has been familiarized with the risks and safety protocols to take.

Try to avoid allowing your child to watch media coverage of the disaster. Some of the images seen might spike anxiety and fear. Instead, choose the images your child will see and provide an explanation of what happened and whether it could have been avoided by taking better safety measures.