

Hurricane Preparedness



Evacuating Safely

Hurricanes have caused some of the biggest weather-related tragedies in history. These storms can pack tremendous wind forces and dangerous amounts of rain. These factors, alone or together, cause destruction.

Mankind has no control over hurricanes, so being educating and making comprehensive preparations are the main means of surviving.

When it comes to protecting yourself from hurricanes, evacuations can be voluntary or mandatory, depending on the strength of the storm and your location. Generally, communities are given a couple of days to prepare to evacuate.

MOST AT-RISK LOCATIONS

The first thing you need to know is whether you live in a hurricane-prone area. Areas on or near the coast have the highest risk, but any area affected by winds or flooding are included, too. If you live in these high-risk locations, prepare now in the event of an evacuation.

The media is the main way local officials provide information about community evacuation notices and routes. Additional warning methods can be used under certain circumstances.

EVACUATION ROUTES

Hurricane evacuation routes are preplanned by city and state authorities. They have been researched thoroughly. Authorities need to know what routes can handle a mass



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Stay in the Know

For a complete list of instructions, visit www.Ready.gov, the Department of Homeland Security's emergency preparedness site.

exodus in the quickest and safest way.

Educate yourself on the main routes in your area as well as any official alternative routes. Emergency

preparedness agencies advise citizens to never take shortcuts. Allow extra time to get to your preplanned location because the roads will be congested. A couple of other tips to keep in mind include making sure your vehicle has plenty of gas and never driving through flooded roadways or downed power lines.

PLANNING IS EVERYTHING

Most people who survive

disasters are grateful to be alive even if they lose all of their possessions. The first priority is to ensure everyone's safety. Make a plan to assemble your family and supplies during an emergency evacuation.

Know where you will stay when you get out of harm's way. A couple of different options in several directions would be advantageous.

Consider that you may have to be in your backup location for an extended period of time,

depending on the amount of damage the hurricane causes in your area. Pets are just like family, so plans should include what to do with them. If at all possible, take them with you.

Check on your neighbors and make sure they are aware of the situation. Make sure they have a way to evacuate.

Hurricanes are a part of life for regions that are home to many people, so knowing the risks and having a plan will put the odds in your favor.



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Know Your School's Plan

Weather conditions can deteriorate well ahead of a hurricane. Tornadoes can be embedded in the outer realms of hurricanes, so even if your location does not get a direct landfall, there are still risks.

If you're a parent to a child in school or daycare, it's important to know the potential movements and landfalls of a major storm.

Educating yourself on your child's school or daycare emergency policies will help give you confidence that they will be safe in an adverse weather situation.

PICK UP

Your hurricane plans should

account for the possibility that your children may be at school or a daycare when weather conditions deteriorate. Decide who will pick the kids up and where to go from there.

Make sure you know the safest route and head there as soon as advised. Older children also will feel safer if you explain the plans to them so they know what to expect in the thick of the situation.

STAYING PUT

Sometimes the safest thing is for everyone to stay put and off the roads. The Department of Homeland Security recommends finding out if your school or daycare is prepared to "shelter in place" if necessary, and where they plan to go if they must leave.

Here are a couple of additional questions to ask your administrators, according to the Department

of Homeland Security's emergency preparedness site, www.ready.gov:

- How they will communicate with families during a crisis?
- Do they store adequate food, water and other basic supplies?

PREPARE A SCHOOL EMERGENCY PLAN

Every daycare provider and school should have site-

specific emergency plans, so if you live in a hurricane-prone area, ask now. If no plan exists, you might consider volunteering to help develop one.

Knowing how to safely reunite your family will give you comfort during an emergency weather situation. Together, you can decide on your next move based on weather forecasts and any evacuation recommendation.

Preparing Your Boat

Your boat is in peril either at sea or in port during a hurricane, but there are some ways to minimize damage.

Since the science of forecasting hurricanes is not exact, it is hard to predict their tracks with absolute certainty. This also means it is tricky for mariners to avoid them.

DANGEROUS LOCATIONS

If at sea, there are some places that are especially dangerous during the hurricane season. Some regions' climates favor the development and movement of hurricanes in the North Atlantic. Other areas support rapid intensification of hurricanes due to warm water conditions. According to the National Hurricane Center, two of these areas are the Gulf of Mexico and the Gulf Stream. Extra caution should be taken in these areas.

The Gulf Stream also causes enhanced sea states resulting from the interaction of ocean current with hurricane wind fields. This interaction creates very steep, short-period waves that make it dangerous to navigate, according to the NHC.

AVOIDING HURRICANES

The best advice from experts to mariners is to completely avoid hurricanes. A captain should never cross the track of a hurricane or think



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he can outmaneuver a potentially deadly storm.

Since weather forecasters are sometimes inaccurate in their calculations, the most important thing to remember at sea according to the NHC is the 1-2-3 rule of thumb. These numbers establish the minimum number of miles to maintain from a hurricane in the Atlantic as the storm draws nearer:

- 1: 100-mile error radius for 24-hour forecast;
- 2: 200-mile error radius for 48-hour forecast; and
- 3: 300-mile error radius for 72-hour forecast.

Larger buffer zones should be established in situations with higher forecast uncertainty, limited crew experience, decreased vessel handling or other factors set by the vessel master, advises the NHC.

SHELTER

Multiple factors should influence decisions about whether to stay out to sea, return to port or stay put in port. The decision to head for a port should be based on up-to-date forecasts that

determine the port's nearness to the hurricane. Current weather conditions also are critical in determining the safety of approaching port.

Remaining in port is wise if it offers enough protection, or if it is too dangerous to leave. Timing is everything: A decision to leave a port to avoid a hurricane must be made early, before conditions deteriorate.

Mariners can reduce the risks to their boats by being aware of their location and the storm's predicted track, as well as making sound decisions on where to weather the storm.

Keeping Food Safe

There could be widespread power outages during and after a hurricane due to high winds. The time it takes to clear the debris and restore power will vary by location. It could take a while, and your food supply could be at risk.

Your family's health will depend on knowledge of proper food safety procedures. When the power goes out, there are things you can do to keep your food safe. The Food and Drug Administration has a few basic tips for keeping food safe — and cold — during a power outage:

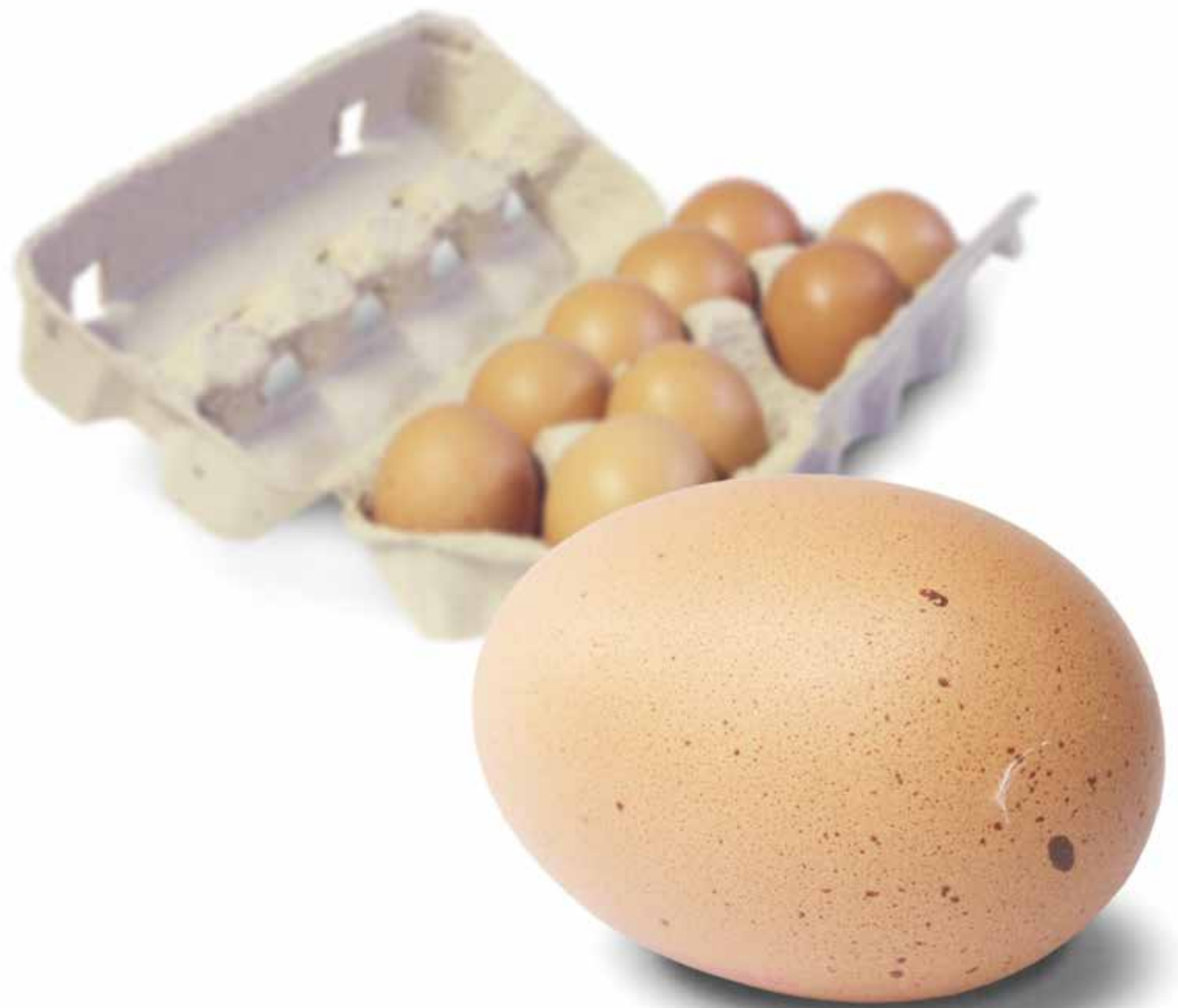
- Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature. The refrigerator will keep food cold for about four hours if it is unopened.
- Buy dry or block ice to keep the refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should keep an 18 cubic foot, fully stocked freezer cold for two days.
- If you plan to eat refrigerated or frozen meat, poultry, fish or eggs while they are still at safe temperatures, it is important that each item is thoroughly cooked to a safe minimum internal temperature to ensure that any food-borne bacteria are destroyed.

RESTORED POWER

The FDA recommends checking the temperature of your appliance's in-unit thermometer when the power kicks on again. If the freezer thermometer reads 40 degrees or below, the food is safe and may be refrozen.

Perishable food such as meat, poultry, seafood, milk and eggs that are not kept adequately refrigerated or frozen may cause illness if consumed, even if you thoroughly cook them. If in doubt, just throw them away, because it is not worth the risk of making your compromised situation even worse.

There are also things to remember when dealing with a power outage, including avoiding the use of food or beverage containers to hold non-food substances, such as gasoline. If you do, dispose of them immediately so as to not confuse anyone in your family and put them in the way of accidental ingestion of potentially dangerous chemicals.



Biggest Hurricane Hazards

Hurricanes create hazards to us on the coast and inland. According to the National Hurricane Center, the major hazards associated with hurricanes are storm surge, storm tide, heavy rainfall, flooding, high winds and tornadoes.

There also are many phases to a dangerous hurricane, underscoring the importance of prevention and evacuation with plenty of time to spare before landfall. The coast always takes the initial brunt of the storm and protects the inland from some of the destruction. In addition to the wind and rain, storm surge and storm tides are dangerous in coastal areas.

STORM SURGE

The storm surge, which can reach heights of 20 feet and span hundreds of miles of coastline, is an abnormal rise of water generated by a storm's winds. The combination of storm surge and large battering waves can result in loss of life, destroyed buildings and erosion.

According to the NHC, storm surge and large waves produced by hurricanes pose the greatest threat to life and property along the coast.

INLAND FLOODING

The next phase of concern for meteorologists and emergency crews is inland impact. Hurricanes eventually are downgraded as they weaken toward communities, buildings and homes, but the torrential rains and overpowering winds can still



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produce widespread destruction.

The strongest hurricanes do not necessarily produce the most rainfall. It depends more on the speed and size each storm, as well as the geography of the area. Slower-moving and larger storms produce more rainfall. In addition,

mountainous terrain enhances rainfall totals.

HIGH WINDS

Hurricane-force winds (74 miles per hour or more) can destroy buildings and mobile homes. Debris such as roofing materials, siding and signs can become flying hazards during

a hurricane.

When the waves break along the coast, they can produce deadly rip currents, which the NHC define as 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.

Considering the multiple points of damage that can be sustained during a major hurricane, it's important to understand where and when a storm is headed. This knowledge can help you make a safe plan and stay apprised of rapidly changing conditions.

Hurricane vs. Typhoon

Many people wonder what differentiates a hurricane from a typhoon. Both are characterized by high winds and torrential rainfall, but is one more dangerous than the other?

According to the American Red Cross, the difference comes down to terminology and location. In the Atlantic and Northeast Pacific, the term “hurricane” is used. We use this term mainly in the United States. Go to the Northwest Pacific and the same type of storm is called a “typhoon.”

DEFINING FACTORS

The same factors are required for both hurricanes and typhoons to develop. A combination of a pre-existing weather disturbance, warm tropical oceans, moisture and relatively light winds all make for ideal hurricane and typhoon conditions, according to the American Red Cross.

If these conditions persist long enough, they can combine to produce the winds, waves, rains and flooding that are identified with hurricanes and typhoons.

DIFFERENCES

Typhoons can be stronger and occur more frequently than hurricanes, because of the warmer Pacific ocean waters. Although typhoons have stronger wind intensities than hurricanes, they comparatively cause less damage simply due to their geographic location. If a storm



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forms in one place and crosses over the International Date Line, it changes names.

That is where the differences end when it comes to comparing hurricanes and typhoons. The storms have many more similarities, including how they are measured and when they are

more likely to occur.

SIMILARITIES

According to the American Red Cross, hurricanes and typhoons are both measured according to the Saffir-Simpson scale, which categorizes them by numbers. Category 1 has the lowest

wind speeds, while Category 5 has the highest wind speeds and is considered the most powerful and dangerous.

Both hurricanes and typhoons begin to lose their strength, speed and size once they hit land, and they share the same season (between June and November).

No matter the similarities and differences, these storms are dangerous to everyone in their paths and should be taken seriously when it comes to preparation and safety. These storms have been known to pop up outside of their typical season, so it is remain vigilant at all times.

Dealing With Mold

After a hurricane, everyone is anxious to get back home and return to normal. Unfortunately, in addition to wind and flood damage, mold can flourish in the aftermath. Be aware of this potential health risk to your family.

Hurricanes cause inland flooding or water damage, leading to excess moisture and standing water that can contribute to the growth of mold in homes and other buildings.

AT-RISK POPULATIONS

Some people are more susceptible to mold due to pre-existing conditions. They should avoid being around it and should not be involved in the cleanup if possible.

According to the Centers for Disease Control and Prevention, people with asthma, allergies or other breathing conditions may be more sensitive to mold. People with immune suppression are more susceptible to mold infections.

Even if you don't have any of these conditions, there are still some risks to consider. People who are sensitive to mold may experience stuffy nose, irritated eyes, wheezing or skin irritation, according to the CDC, as well as difficulty breathing and shortness of breath.

If you or your family members have health problems after exposure to mold, contact your doctor or other health care provider immediately for a full checkup.



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RECOGNIZING MOLD

According to the CDC, your sense of sight and smell can help you recognize mold. Sometimes you can see the mold or notice unusual discoloration or smell a foul

odor.

Controlling and removing moisture in your home will help keep prevent mold. When it comes to eradicating it, you may need to call in a professional to help. Use

commercial products or a bleach solution of one cup of household bleach in one gallon of water to remove mold growth from hard surfaces.

Use a stiff brush on rough surface materials such as

concrete. Always be sure to wear protective gloves and eyewear when dealing with mold or bleach. Both can cause damage to your skin or eyes, so protection is key to eliminating mold in the safest way possible.