

Hurricane Preparedness Guide 2020

FOR HOMEOWNERS

GENERAC®



Storm-ready starts today.

Be ready to weather any storm with Generac.

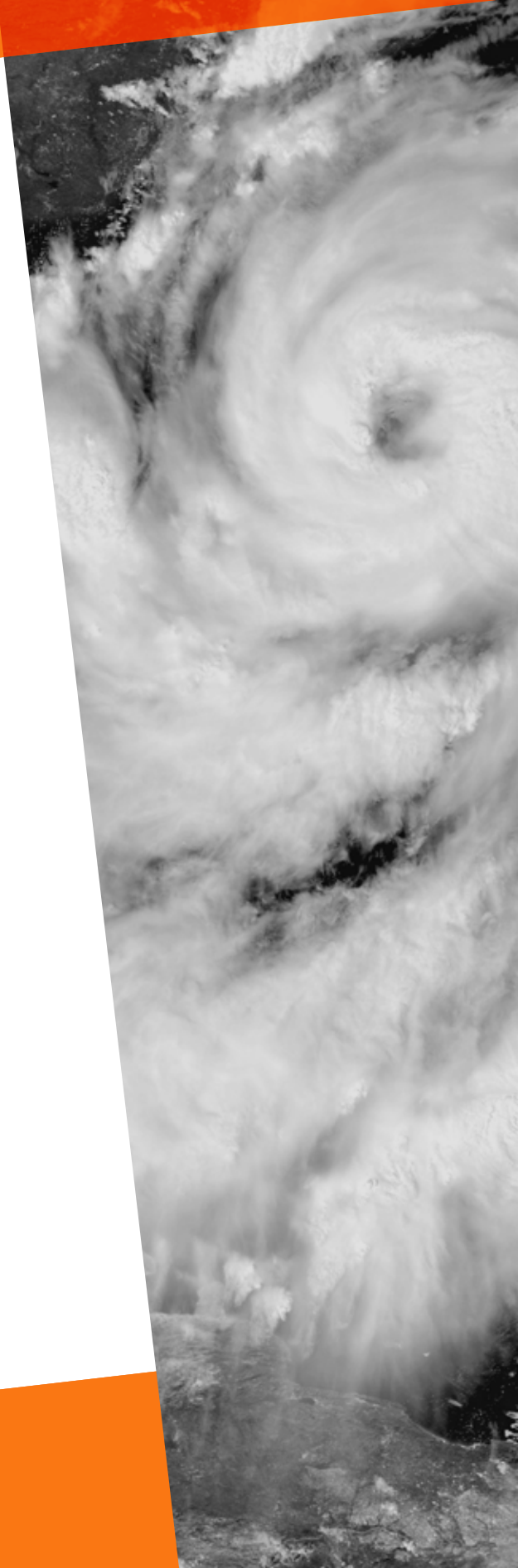
Hurricanes are a fact of life

Hurricanes and tropical storms accounted for the most severe outages in recent years, many of those outages lasting for several days. In fact:

- In 2019, **Hurricane Dorian was a devastating Category 5 Atlantic hurricane.** It became the most intense tropical cyclone on record to strike the Bahamas, and is regarded as the worst natural disaster in the country's history.
- In 2017, **Hurricane Harvey cut power from more than 1.67 million customers** and power restoration wasn't completed in the hardest hit areas near Houston until September 8, which left many without power for 14 days.
- Also in 2017, **Hurricane Maria alone topped the largest outages in US history** with 1.25 million customer-hours without power, and many are still off the grid in 2019.
- **Hurricane Irma knocked out power to 6.7 million utility customers** in Florida alone, 64 percent of the state, according to the Florida Division of Emergency Management. One hundred thousand of those customers were still without power nine days later.
- **Hurricane Florence took out power for 976,000** in the Carolinas and Virginia, with the flooding closing as many as 1,600 roads, including all roads in and out of Wilmington, North Carolina, for several days.

When the power goes out, life becomes significantly more difficult, regardless if it is during a severe thunderstorm or a hurricane. Backup generators, whether portable or home standby, give families a layer of safety and security.

As backup power experts, Generac aims to provide peace of mind when power is out or unreliable. The aging power infrastructure and growing intensity of severe weather, including hurricanes, can make people feel unsafe and unsure. Generac works to give every person and family the information needed to help prepare themselves, their homes and their families, for when life gets disrupted by power outages.



The year ahead

An active season

The 2020 hurricane season will arrive at an unique moment in world history. While the global COVID-19 pandemic has kept many Americans at home, sheltering in place while under orders of social distancing, an above-average hurricane season has been predicted by Colorado State University hurricane researchers and AccuWeather.

The CSU Tropical Meteorology project team predicts 16 named storms during the Atlantic hurricane season, which runs between June 1 and November 30. The research models indicate as many as eight storms will become hurricanes and will reach major hurricane strength (Saffir/Simpson category three or higher). This outlook anticipates major power outage events and points to early homeowner preparedness as a key aspect for surviving the storms with resilience.

2020 hurricane predictions

NOAA experts watch several global climate patterns that drive the development and strength of hurricanes during a high-activity period, including Atlantic Multi-decadal Oscillation (AMO) and El Niño/Southern Oscillation (ENSO) influences. Experts predict that 2020 hurricane activity will be about 140% of the average season.

Reasons for the active season include warm seawater in the Atlantic Ocean and also the lack of an El Niño. A determining factor in forecasting the hurricane season is whether we are in an El Niño or La Niña climate pattern. El Niño is a natural warming of the Pacific Ocean waters, which tends to suppress the development of Atlantic hurricanes. The opposite, La Niña, is marked by cooler ocean water and tends to increase hurricanes in the Atlantic.

For 2020, the above-average seasonal hurricane forecast from CSU is due to the likely lack of El Niño this summer and fall. Thus, the early forecast is a guide for insurance companies, emergency managers and the media to use to help prepare American residents for the year's hurricane threat.



Understanding storm categorization

A new hurricane scale

At the 2019 American Meteorological Society's annual meeting, AccuWeather debuted their new hurricane rating system. There have been calls from various groups to update the current system, the Saffir-Simpson scale, which only rates hurricanes based on sustained wind forces (top wind speed). Recent storms have showed that hurricanes with lower wind speed cause more damage than what they're categorized as due to slow movement and a large amount of rainfall.

SAFFIR-SIMPSON HURRICANE WIND SCALE

- Created in the late 1960s and expanded in the 1970s
- The **most popular scale** used by weather networks and government organizations
- Measures hurricanes on a **scale of 1 to 5**, with 5 having the highest wind speed
- Based on the **sustained wind speed** of a hurricane
- Hurricanes reaching **Category 3 and higher** are considered major hurricanes with the potential for significant loss of life and damage

ACCUWEATHER'S REALIMPACT™ SCALE FOR HURRICANES (ACCUWEATHER RI™)

- To be used for the **first time** during the 2019 hurricane season
- Measures hurricanes on a **scale of 1 to 5**, with 5 being the most "strenuous"
- There is also a "Less than 1" rating to "provide insight on hurricanes and tropical storms that don't rise to a Category 1 on the Saffir-Simpson scale" but may "still cause substantial destruction, injury or loss of life."
- Includes **flooding, rain, high winds and storm surge** as well as **total economic impact** from the storm to determine category

WHAT DOES THIS MEAN?

According to AccuWeather, the RI scale would differ at times from the Saffir-Simpson scale. For example, NOAA listed Hurricane Harvey as a Category 4, but RI says it would have been a Category 5 because of the economic impact on the Houston region.

There will likely be reports from news stations that include both measurement systems. While the category numbers may differ, it is important to understand each term to help evaluate the risk of any storm.

The Saffir-Simpson hurricane scale

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	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.
2	96-110 mph 83-95 kt 154-177 km/h	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.
3 MAJOR	111-129 mph 96-112 kt 178-208 km/h	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.
4 MAJOR	130-156 mph 113-136 kt 209-251 km/h	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.
5 MAJOR	157 mph or higher 137 kt or higher 252 km/h or higher	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.

Data source: <https://www.nhc.noaa.gov/aboutsshws.php>

Knowledge is power

Terms to know

When meteorologists begin mentioning “developing” conditions for a possible tropical storm or hurricane, it is not time to panic. From June 1 to November 30, conditions are ripe for the development of hurricanes and for those storms to hit the Atlantic and Gulf coasts. However, not every storm monitored will hit the United States. When a meteorologist begins tracking a storm, it is not guaranteed to hit. Many storms are monitored while still developing off the West African coast, but many factors come into play to determine if those systems will reach the United States, and if those systems will become hurricanes or if they diminish.

Listed here are hurricane terms that are often used when monitoring a storm system likely to turn into a hurricane. It's important to understand them and know when to start preparing or evacuating homes, as well as when a system will not be a threat.

Advisory: Official message issued by storm warning centers with details on location, intensity, movement and precautions for storms.

Direct Hit: Locations that experience the center and eye wall of a hurricane.

El Niño, La Niña, ENSO: El Niño and La Niña are warming and cooling phases of a recurring climate pattern in tropical Pacific (aka El Niño-Southern Oscillation or ENSO). The pattern shifts every two to seven years, creating disruptions in temperature, wind and precipitation. These changes affect the number and intensity of hurricanes.

Flash Flood: A rapid flooding in low-lying areas that may be caused by heavy rain as seen with many hurricanes and tropical storms.

Flood Warning: Issued when a flood is imminent or already happening.

Hurricane/Typhoon/Cyclone: A cyclone, typhoon and hurricane are all the same type of storm – a tropical cyclone that has reached 74 mph or more – just given different names based on where in the world it hits.

Hurricane Eye: The center of a hurricane.

Hurricane Eye Wall: Extreme winds surrounding the hurricane eye. An Extreme Wind Warning can be issued as the eye approaches.

Hurricane Warning: Issued 36 hours in advance of expected hurricane force winds (sustained at 74 mph). The warning may stay in effect if dangerously high water or dangerously high water and waves continue, even if winds dip below hurricane force.

Hurricane Watch: Issued 48 hours in advance of possible hurricane force winds (sustained at 74 mph or higher). Hurricane preparation becomes more difficult when winds reach tropical storm force.

Indirect Hit: Locations that do not experience a direct hit from a hurricane or tropical storm, but do experience the hurricane force winds.

Landfall: When the eye of the storm meets with the coastline.

NOAA: National Oceanic and Atmospheric Association, an agency within the Department of Commerce that works to understand and predict changes in climate, weather and oceans. The National Weather Service (NWS) is a branch under NOAA.

RealImpact Scale: Developed by AccuWeather and used for the first time during the 2019 hurricane season. Measures storms on a scale of one to five based on flooding, rain, high winds, storm surge and economic impact.

Saffir-Simpson Hurricane Wind Scale: Most popular and recognized hurricane rating system, created in late 1960s and expanded in 1970s. Measures hurricanes on a scale of one to five based on sustained wind speed.

Storm Surge: An abnormal rise in sea level due to a hurricane or other severe storm. This is often the greatest threat to loss of life and property damage.

Storm Tide: A combination of normal high tide and storm surge, measuring the total seawater level during a storm.

Tornado Warning: Due to the high winds and cyclical nature of hurricanes, tornadoes can form. A Tornado Warning may be issued before, during or after hurricanes. A warning means it may occur within 36 hours.

Tropical Storm: A tropical cyclone with maximum sustained wind speed ranging from 39 to 73 mph.

Wind Shear: Strong high-atmospheric winds typically found during El Niño that blows the tops off storms, decreasing the likelihood they turn into tropical storms or hurricanes.

Hurricane checklist

BEFORE THE STORM

- ☐ Take the “Power Outage Preparedness” quiz at [Generac.com](https://www.generac.com) and note the score
- ☐ Review [Generac.com](https://www.generac.com) for the best generator option
- ☐ Get a backup generator that best meets your unique needs and budget
- ☐ Review your emergency plans should the power go out for an hour or even multiple days
- ☐ Review emergency plans for evacuation
- ☐ Fill gas cans
- ☐ Identify safest location in the home to wait out storms
- ☐ Identify local shelters
- ☐ Check insurance policy/coverage
- ☐ Conduct maintenance on backup generator
- ☐ Check the yard and landscaping for any trees that should be trimmed, clear gutters, etc.
- ☐ Get gas in the event of an evacuation or to run a portable generator
- ☐ Use hurricane shutters or board up windows and doors with 5/8-inch plywood
- ☐ Reinforce garage doors
- ☐ Bring in outside items if they can be picked up by high winds
- ☐ Clear gutters of debris
- ☐ Create communication plan with family members in case of an outage

PREPARE EMERGENCY KIT:

- ☐ Water, one gallon per person per day for both drinking and sanitation
- ☐ Food, non-perishables, and a manual can opener for food
- ☐ Battery-powered or hand crank radio, and a NOAA weather radio with tone alert and extra batteries for both
- ☐ Flashlight and extra batteries
- ☐ First-aid kit
- ☐ A whistle to signal for help
- ☐ Moist towelettes, and garbage bags and plastic ties for personal sanitation
- ☐ Wrench and pliers to turn off utilities
- ☐ Cell phone and portable charger
- ☐ Copies of birth certificates, Social Security Card, passports and other important documents in a sealable plastic bag

PREPARE PET EMERGENCY KIT:

- ☐ At least five days supply of pet food
- ☐ Water
- ☐ Food/Water bowls
- ☐ Waste bags
- ☐ Leash
- ☐ Pet toys
- ☐ Photo of you and your pet for proof of ownership, shots and medication list in a sealable plastic bag

Hurricane checklist

DURING THE STORM

- ☐ Take shelter in the safest room in the home
- ☐ Monitor updates with a radio or television
- ☐ Save cell phone battery as much as possible in case the power goes out
- ☐ If power is lost, unplug all outlets to reduce the chance of damage due to a power surge
- ☐ If flooding nears the home, turn off electricity
- ☐ Evacuate if the home is damaged or an emergency official requests it
- ☐ Do not walk, swim or drive through floodwaters — just six inches of fast-moving water can knock you down, and one foot of moving water can sweep your vehicle away

EXTENDED DURATION

- ☐ Keep freezers and refrigerators closed
- ☐ Only use generators outdoors and away from windows
- ☐ Do not use a gas stove to heat your home
- ☐ Disconnect appliances and electronics to avoid damage from electrical surges
- ☐ Have alternate plans for refrigerating medicines or using power-dependent medical devices
- ☐ If the home flooded, have a professional electrician check the residence before turning electricity on

One way to ensure your home does not lose power is to invest in a generator. FEMA recommends the installation of a standby generator or the purchase of a portable generator as part of preparing your home and family for a hurricane.

Never connect a portable generator to the house wiring by plugging it into an appliance outlet. Back feeding a house is dangerous and is against the law. The outdoors is the only safe place to operate a portable generator. To protect yourself from the dangers of carbon monoxide, taking the portable generator outside is absolutely mandatory to keep your family safe.



Hurricane checklist

AFTER THE STORM

- ☐ Do not return from evacuation unless given permission by local authorities
- ☐ If there is severe damage to the home, leave immediately and contact local officials
- ☐ Check for gas leaks. If there may be a gas leak, leave immediately and contact a professional to check the line, report it to local authorities
- ☐ Report downed power lines to the utility company and local police and fire departments
- ☐ Check on neighbors
- ☐ Report losses to insurance
- ☐ Take photos of the home, yard and street
- ☐ Make a list of any missing or damaged property
- ☐ Do not drive down closed roads – they may be flooded or have debris or downed power lines
- ☐ Consider contacting contractors to clean up large debris
- ☐ Keep receipts for possible reimbursement programs through insurance, city or US government programs
- ☐ If power is out, unplug all major appliances before turning the electricity back on to minimize possible surge damage
- ☐ If the home flooded, have a professional electrician check the residence before turning electricity on
- ☐ Save phone calls for emergencies. Phone systems are often down or busy after a disaster. Use text messages or social media to communicate with family and friends



Hurricane prep calendar

Getting ready one step at a time

Preparing a home and family for a hurricane doesn't take much time, but it can feel overwhelming to start from scratch. To help, we've created a recommended timeline so you can do a little every month.

JANUARY

- Take time to review the emergency plan:
 - Where is the emergency kit?
 - What is the safest place in your house in case of a storm?
- Make a list – are there any repairs that need to be done around the house or landscaping after the first round of winter?
- Take the Power Outage Preparedness Quiz at [Generac.com](https://www.generac.com). What's the result? How can it improve?

FEBRUARY

- Find the home backup generator that is right for you at [Generac.com/for-homeowners/home-backup-power/build-your-generator](https://www.generac.com/for-homeowners/home-backup-power/build-your-generator).
- Review where the recommended generator can be purchased locally. If interested in a home standby generator call 888-GENERAC to request a free quote.
- It can take up to six weeks from purchase to install a home standby generator, so it's important to start the process early in the year.

MARCH

- Identify local shelters. Ensure the location will accept pets or find an alternative place to board an animal.
- Is the home in a floodplain or storm surge area? Check insurance policies for flood insurance coverage – it can take 30 days for flood insurance to take effect.

APRIL

- Check the yard and landscaping for any trees that should be trimmed, windows that need to be replaced, gutters cleared, etc.
- Make copies of important documents and place in sealable plastic bags. Keep the copied documents in the emergency kit. The original documents should be placed in a secure location, such as a safe.

MAY

- Weather organizations will begin making official predictions for the upcoming hurricane season. Review hurricane terms to know.
- National Hurricane Awareness Week is May 3-9. Check out [Ready.gov](https://www.ready.gov) and [Generac.com](https://www.generac.com) for updates on this year's hurricane season.
- Take the "Power Outage Preparedness" quiz at [Generac.com](https://www.generac.com). Has your score improved since January?
- Review generator options at [Generac.com](https://www.generac.com) and purchase a backup generator.

JUNE

- Hurricane season begins June 1 and goes through November 30.
- Perform any needed maintenance on your generators and run any portable generators to ensure the product is in working condition.
- Review emergency plans if the power goes out for an hour, up to multiple days.

Hurricane prep calendar

JULY

- Check the yard and landscaping for any trees that should be trimmed, gutters cleared, etc.

AUGUST

- Take advantage of back-to-school sales to add to the emergency kit: backpacks, batteries, extra pair of clothes, etc.

SEPTEMBER

- September is National Preparedness Month. It is also when hurricanes become more common in the Atlantic.
- Review emergency plans and shelter locations.
- Take the “Power Outage Preparedness” quiz at [Generac.com](https://www.generac.com). Has your score improved since May?
- Review hurricane terms.
- Fill up gas cans.

OCTOBER

- Check landscaping as fall arrives – clear leaves from gutters and trim tree limbs.

NOVEMBER

- Hurricane season ends November 30. It is still possible for a major hurricane to make landfall on the Atlantic coast.
- Before winterizing outdoor tools, review what may be needed if a hurricane hits: chainsaw, leaf blower, portable generator.

DECEMBER

- Pull out the food from the emergency kit and check expiration dates.
- Make a list – does anything need to be replaced or added?



ARE
YOU
READY ?



Learn more

1-888-GENERAC (1-888-436-3722)

[Generac.com/Outages](https://www.generac.com/Outages)

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