



Hurricane and Tropical Storm Action Plan

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Risk Consulting for Businesses,
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AN EBSCO COMPANY

Disaster Preparedness from Valent Group

It is vital to have a plan in place well in advance of possible catastrophic events in order to protect you, your employees, your customers, and your business.

According to the National Weather Service, the hurricane and tropical storm season begins on May 15 in the Pacific region, and June 1 in the Atlantic region of the United States. It runs through the end of November, and during this season there is potential for significant wind, water, and flood damage, with the most destructive storms occurring in August and September.

Hurricane Information

What to Expect

The Saffir-Simpson Hurricane Scale is a measurement scale of hurricane wind and ocean surge intensity ranging from 1 to 5. Category 1 is a weak hurricane and Category 5 is the most intense.

1

Category 1 Hurricane: 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

Category 2 Hurricane: 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

Category 3 Hurricane: 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

Category 4 Hurricane: 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

Category 5 Hurricane: 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.

Emergency Preparedness: Before the Hurricane

At the beginning of the hurricane season:

Establish an Emergency Preparedness Plan (EPP) that takes prevention, emergency response, and disaster recovery into consideration. If an EPP is already in place, review and update it as needed for hurricane readiness. Designate an Emergency Coordinator and an EPP Team. Assign responsibility to specific persons for advance arrangements to initiate the plan.

Pre-Hurricane Preparation

Step 1: Secure Supplies and Information

Ensure emergency supplies and equipment are on hand and ready for the on-site emergency action team. Obtain cash for post-hurricane needs such as buying food and supplies, or paying employees and contractors.

Hurricane Emergency Kit

- ☐ Three-day supply of drinking water and nonperishable food
- ☐ Medical supplies/first-aid kits
- ☐ Two-way radios or cell phones (with spare batteries)
- ☐ Emergency lighting; flashlights and spare batteries
- ☐ Emergency radio (battery, solar, or crank-powered)
- ☐ Portable pumps and hose
- ☐ Lumber, plywood, nails
- ☐ Hand and power tools
- ☐ Plastic covers and tarpaulins
- ☐ Whistles to signal and direct attention during and after a hurricane
- ☐ Blankets and extra clothing
- ☐ Have all employee, vendor, and client contact information collected and backed up at an off-site location
- ☐ Maintain copies of vital records off site; including business and customer records, utility plans, etc.

Step 2: Initiate Emergency Preparedness Plan (EPP)

	Maintain a current list of telephone numbers and contacts for emergency action team members, emergency management (civil defense), local police and fire departments, medical facilities, utilities, contractors, vendors, insurance agent/broker, building owner, HVAC contractor, electrician, plumber, etc.
	Contact local authorities to plan and coordinate activities before the need for emergency action. That way you will both be better prepared.
	Designate a person to monitor weather conditions and keep the action plan leader up to date on weather conditions before, during, and after a hurricane.
	Arrange backup communications, such as two-way radios or cellular phones.
	Arrange an off-site emergency communications control center, such as a hotel meeting room just outside the hurricane area, in case it becomes too dangerous to remain on site.
	Review your business continuity plan and update as needed, including employee contact information. If you do not have a business continuity plan, consider utilizing the Ready Business Continuity and Disaster Preparedness Plan provided by Valent Group to assist in developing one.
	Remind employees of key elements of your business continuity plan, including post- event communications procedures and work/payroll procedures. Make sure all employees have a paper copy of the plan.
	Ensure that post-event communications procedures discuss how employees will be notified when to return to work. (Local radio or TV station public service announcement, telephone call, employee intranet, etc.)
	Inspect all fire protection and life safety equipment.
	Provide diesel or gasoline-driven emergency generator on site with full tank of fuel and reserve fuel on hand. (High demand may make it difficult to obtain a generator. Advance arrangements and/or retainers may ensure availability.)
	Determine which company records are vital and make plans to protect/relocate them.
	Identify vulnerable and/or critical equipment and processes. Provide instructions for safely shutting down processes, data processing equipment, etc. Consider disconnecting and relocating critical equipment to higher elevations.

	Identify key equipment and stock that will need to be protected with tarpaulins or waterproof covers.
	Identify a hot site (an off-site data processing location for immediate business resumption) or a cold site (an off-site location ready for setup of your own data processing equipment). Also, consider an off-site business recovery facility where you can resume general business operations.
	Identify actions to take in the event of live electrical wires, leaking gas, flammable liquids, corrosive/toxic materials, and damage to foundations or underground piping.
	Evaluate the interdependency of your facilities and develop a contingency plan.
	Maintain ongoing agreements with contractors for supplies and repairs needed after a hurricane. When possible, use contractors who are outside potential hurricane areas, as local contractors may also have storm damage or local authorities' needs may be given a higher priority.
	Maintain emergency supplies throughout hurricane season. (Drinking water, nonperishable food, medical supplies, flashlights, batteries, walkie-talkies, portable pumps, hose, emergency lighting, lumber, plywood, nails, hand and power tools, plastic covers and tarpaulins, etc.)
	Maintain straps or other means on hand to brace/anchor yard storage, signs, cranes, and roof-mounted equipment.
	Inspect and repair roof flashings, coverings, drains, gutters, and edge strips. Remove debris and unrestrained materials from roofs.
	Inspect and maintain signs, stacks and tower supports, guy wires, and anchor points.
	Repair or replace loose or worn door and window latches, hardware, and seals.
	Provide pre-fitted hurricane shutters and/or plywood for windows and doorways where practical. If possible, install them in advance and leave them in place for the hurricane season.
	Prepare for hurricane-related flooding with sandbags and an ample supply of brooms, mops, squeegees, and other absorbents to help remove water.
	Trim or remove any large trees that could fall and damage buildings or impair fire protection or electrical power and communication lines, etc.

	Arrange for site security after a hurricane.
	Prepare space for inside storage of dumpsters, yard equipment, and yard stock.
	Evaluate approaches to your facility for bridges or other low-lying areas for emergency access and employee safe routes to return to work.
	Establish priority/backup personnel or rotation personnel for critical operations and/or processes. Employees may also have personal emergencies and may not be available to return to work promptly.

Impending Hurricane Preparation

Step 1: Inspection and Fortification of Facility

	Monitor and map the hurricane to keep current on the storm' s progress.
	Implement the hurricane emergency action plan. Take specific actions at the predetermined times as outlined in the plan.
	Shut down operations that depend on outside power sources in an orderly manner, following stablished procedures.
	Ensure emergency supplies and equipment are on hand and ready for the on-site emergency action team. <ul style="list-style-type: none">+ Three-day supply of drinking water and nonperishable food+ Medical supplies/first-aid kits+ Flashlights and batteries+ Walkie-talkies and/or cell phones (with spare batteries)+ Portable pumps and hose+ Emergency lighting+ Lumber, plywood, nails+ Hand and power tools+ Plastic covers and tarpaulins
	Obtain cash for post-hurricane needs such as buying food and supplies or paying employees and contractors.
	Protect and/or relocate vital records off site. Include blueprints, structural records, utility plans.
	Relocate water-sensitive equipment and materials to safe areas away from exterior doors and windows and off the floor.
	De-energize and cover computers, machinery, and stock with tarpaulins and waterproof covers.
	Check and clear floor drains.
	Isolate or remove any chemicals that can react violently with each other.
	Shut down gas-fired equipment and shut off main gas valves.
	Shut down all noncritical and nonessential electrical equipment.
	Disconnect the main electrical feeds to the facility, if possible.
	Inspect and make repairs to roof drains, gutters, and flashing.

	Secure roof-mounted equipment such as HVAC units and exhaust vents.
	Check guy wires on antennas, stacks, and towers.
	Remove TV and radio antennas and satellite dishes from the roof.
	Remove unrestrained materials from the roof.
	Close and latch exterior doors, windows, and roof hatches.
	Install hurricane shutters/plywood over doors and all windows. Where shutters cannot be installed, tape both sides of the glass to minimize damage from wind-driven rain and flying glass.
	Clean out storm drains, culverts, and catch basins.
	Fill all aboveground and underground tanks with product or water.
	Verify that all fire protection equipment is in service.
	Check/maintain all necessary backup equipment, such as emergency generators and communication systems/devices.
	Fill the fuel tanks of generators, fire pumps, and all company-owned vehicles.
	<p>Conduct a yard inspection for unrestrained materials, specifically:</p> <ul style="list-style-type: none"> + Remove loose yard debris. + Relocate nonessential yard equipment to a safe indoor location (furniture, trash receptacles, portable planters, portable signs, dumpsters, etc.). + Relocate yard storage of raw and finished goods indoors or secure. + Secure yard storage of flammable liquids drums or move them to a safe location away from important buildings. + Anchor all portable buildings and trailers to the ground. + Secure scaffolds and cranes. Secure scaffolds to the building. + Fasten rail crane chassis to track with bolts and clamps. + Brace outdoor signs.
	Notify key customers, suppliers, and partners of office/facility closing and contingency plans.
	Make decisions on when to excuse employees so that they have sufficient time to prepare their homes and families.
	Customize messages for business' website, telephone recording, employee intranet, etc.

Procedures During a Hurricane

Step 1: Immediate Actions

	Emergency personnel should stay at the facility only if safe to do so. Notify local authorities if personnel are staying on site.
	Keep names and phone numbers of your electrician, heating contractor, plumber, fire department, and building owner easily accessible.
	<p>In an emergency situation, comply with all directions provided by authorities. Keep your first-aid kit available at all times.</p> <ul style="list-style-type: none">+ Designate times for key staff members to call into conference calls for situation overviews.+ Update employee emergency hotline and/or company intranet and website with posting on the status of the facility.+ When safe to do so, patrol the property continuously. Watch for roof leaks, pipe breakage, fire, or structural damage.+ Constantly monitor any boilers that must remain online.+ During power failure, turn off electrical switches to prevent re-energizing of equipment until necessary checks are completed.

Post-Hurricane Procedures

Step 1: Immediate Actions

The devastation a hurricane leaves in its wake depends on the location population density, and hurricane size. In the immediate aftermath of a hurricane, it is important to quickly and calmly assess the situation.

- Do not move seriously injured individuals. If high-rise buildings are in the general area, falling debris may make open areas more dangerous than remaining inside the buildings.
- + Watch out for fallen power lines and broken gas lines.
 - + Provide search and rescue personnel with last known location of any missing victim(s).
 - + Stay away from power lines, buildings, and any object that might fall.
 - + Secure the site and provide watch service if necessary.
 - + Visually check for open bus bars, conductors, and exposed insulators before re-energizing electrical systems.

Step 2: Recovery Actions

Survey facilities for damage. If damage has occurred, contact the Claims Service Center at 800- 000-0000 as soon as possible. Take photographs of the damage.

	Conduct a roll call of all personnel on the premises.
	Assess the damage.
	Look for safety hazards such as live electrical wires, leaking gas, flammable liquids, corrosive/toxic materials, and damage to foundations or underground piping, blocked roof drains, reptiles, etc.
	Photograph and document any damage.
	Restore fire protection systems if necessary.
	Clean roof drains and remove debris from roofs.
	Make temporary repairs to protect the structure and supplies.
	Begin salvage operations.
	Notify key customers, suppliers, and partners of office/facility reopening and any necessary property or operational changes resulting from storm damage.
	Debrief on the successes and shortcomings of your emergency plan, compile a log of actions to be taken, and incorporate improvements.

Resources

As we enter the heart of hurricane season, here are a few of hurricane resources to help you prepare:

On-Demand Webinar: Prepare for the 2016 Hurricane Season

http://go.agilityrecovery.com/CNT-RCRDWBNR-ProtectYourBusinessThisHurricaneSeason_VideoLP.html?aliid=73375858

Checklist: Hurricane Preparedness - Actions to take before, during and after the storm.

<http://info.agilityrecovery.com/a0330j0pxEOs000EzGIL805>

Blog Post: 3.5 Historical Reason Not to Let Your Guard Down During Hurricane Season

<http://info.agilityrecovery.com/r80x0E3L3GYjsIEp000x050>

FEMA Community Hurricane Preparedness Training:

<https://training.fema.gov/is/courseoverview.aspx?code=is-324.a>

FloodSmart:

<https://www.floodsmart.gov/>

NationalHurricaneCenter:

www.hurricanes.gov

NOAA, TropicalCyclonePreparedness:

www.nws.noaa.gov/os/hurricane/resources/TropicalCyclones11.pdf

About Valent Group:

Valent Group provides risk consulting for businesses, employer benefit groups and individuals across the Southeast. Valent Group is an independently owned risk consulting and insurance firm headquartered in Birmingham, Ala., with offices in Huntsville, Mobile, Decatur and Bay Minette. We are a subsidiary of EBSCO Industries. For more information, visit www.valentgroup.com

About EBSCO Industries, Inc.:

Founded in 1944 by the late Elton B. Stephens, EBSCO Industries, Inc. has evolved into a global company with businesses in a range of industries, including Information Services, Publishing and Digital Media, Outdoor Products, Real Estate, Manufacturing and Distribution and Business Services. Headquartered in Birmingham, Ala., EBSCO operates divisions and subsidiaries in 23 countries, employing almost 5,000 people. For more information about EBSCO, please visit www.ebscoind.com





HOW TO PREPARE FOR A HURRICANE

AMERICA'S
PrepareAthon!SM
BE SMART. TAKE PART. PREPARE.

HURRICANE BASICS

Hurricanes have the power to cause widespread devastation, and can affect both coastal and inland areas. *How to Prepare for a Hurricane* explains how to protect yourself and your property, and details the steps to take now so that you can act quickly at a time when every second counts.

WHAT

Hurricanes are massive storm systems that form over the water and move toward land. Threats from hurricanes include high winds, heavy rainfall, storm surge, coastal and inland flooding, rip currents, and tornadoes. These large storms are called typhoons in the North Pacific Ocean and cyclones in other parts of the world.

The Saffir-Simpson Hurricane Wind Scale classifies hurricanes into five categories based on their wind speed, central pressure, and wind damage potential. With wind speeds of 111 miles per hour or more, Category 3, 4, and 5 hurricanes are major according to this scale. Category 1 and 2 hurricanes can also cause damage and injuries. The Saffir-Simpson scale is shown at the end of this document.

WHEN

The Atlantic hurricane season runs from June 1 to November 30, with the peak occurring between mid-August and late October. The Eastern Pacific hurricane season begins May 15 and ends November 30.

WHERE

Each year, many parts of the United States experience heavy rains, strong winds, floods, and coastal storm surges from tropical storms and hurricanes. Affected areas include all Atlantic and Gulf of Mexico coastal areas, Puerto Rico, the U.S. Virgin Islands, Hawaii, parts of the Southwest, the Pacific Coast, and the U.S. territories in the Pacific.

IMPACT

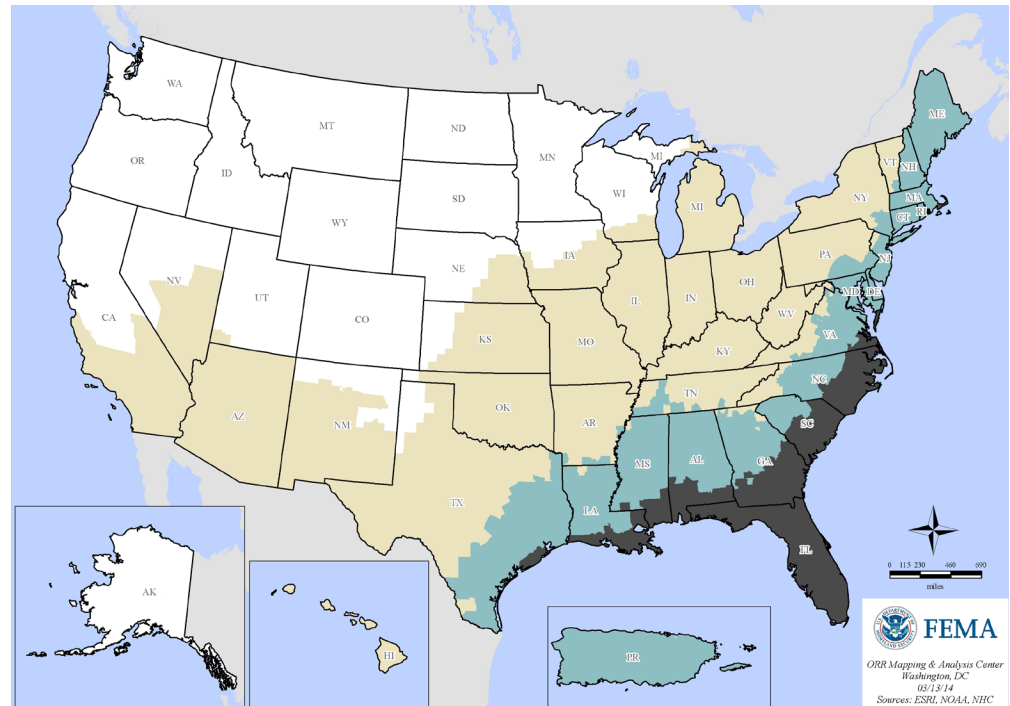
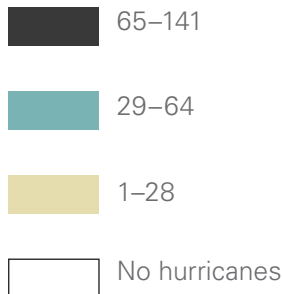
Hurricanes can cause loss of life and catastrophic damage to property along coastlines and can extend several hundred miles inland. The extent of damage varies according to the size and wind intensity of the storm, the amount and duration of rainfall, the path of the storm, and other factors such as the number and type of buildings in the area, the terrain, and soil conditions. The effects include the following:

- Death or injury to people and animals;
- Damage or destruction of buildings and other structures;
- Disruption of transportation, gas, power, communications, and other services;
- Coastal flooding from heavy rains and storm surge; and
- Inland flooding from heavy rains.

KNOW THE RISK

Frequency of Hurricane and Tropical Storm Activity by County Atlantic Data: 1851–2012 ~ Pacific Data: 1949–2012

This map depicts the frequency with which counties have experienced a hurricane or tropical storm based on a 125-mile-wide storm path around the center point of the storm.



YOUR GOAL FOR PROTECTION

PERSONAL PROTECTION

Deaths and injuries during hurricanes can be caused by building damage from high winds, windborne debris, storm surge, and flooding.

EVACUATE

Because hurricanes can be detected and tracked in advance of making landfall, residents in the storm's path often get several days of advance notice. When a hurricane threatens your area, the best action to protect yourself and your family from the high winds and flooding caused by hurricanes is to evacuate when ordered to do so, before those conditions hit your area. Know and follow the directions from local officials for community evacuation or seek higher ground for localized flooding.

PROPERTY PROTECTION

REINFORCE FOR WIND, ELEVATE FOR WATER

Your goal now, before a hurricane occurs, is to reduce the risk of damage to structures from winds and flooding. This includes strengthening the building's outer shell—including the doors, windows, walls, and roof—and removing or securing all objects and non-building structures, as well as clearing the outside areas around the building. Measures to protect against potential flooding include waterproofing basements and elevating critical utilities (e.g., electrical panels and heating systems). In flood-prone areas, consider elevating the entire structure.

RISK MANAGEMENT

INSURANCE

Purchasing flood insurance provides financial protection for the cost of repairs due to flood damage. Standard insurance policies do not cover flooding, including storm surge flooding, but flood insurance is available for homeowners, renters, and business owners through the National Flood Insurance Program. You may also be able to purchase insurance for wind.

EMERGENCY NOTIFICATIONS

While storms are tracked as soon as they have the potential to become a tropical cyclone, it is difficult to accurately predict the path of the storm far in advance. Forecasters generally identify a cone or a range to illustrate the path that the storm may take.

The National Weather Service (NWS) of the National Oceanic and Atmospheric Administration (NOAA) issues hurricane watches and hurricane warnings, as well as several other hurricane-related alerts. These include watches and warnings for high winds, storm surge, flooding (e.g., flash flooding, coastal flooding, river flooding), thunderstorms, and tornadoes. Watches, warnings, and evacuation notices are science-based predictions that are intended to provide adequate time for evacuation. Those who wait for actual confirmation of a catastrophic event may be trapped by high winds, flooding, or traffic. Download the *Be Smart. Know Your Alerts and Warnings* document at www.ready.gov/prepare for a summary of available notifications.

HURRICANE/TROPICAL STORM WATCH

NWS issues a **tropical storm or hurricane watch** for an area 48 hours prior to when it expects hurricane or tropical storm conditions to materialize. During a watch, tune in to NOAA Weather Radio All Hazards, local radio, or television for information and conduct outside preparedness activities.

HURRICANE/TROPICAL STORM WARNING

NWS issues a **tropical storm or hurricane warning** for an area when weather conditions for a tropical storm or hurricane are expected within 36 hours. During a warning, complete storm preparations and immediately leave the threatened area if directed by local officials.

EXTREME WIND WARNING

NWS issues an **extreme wind warning** to notify an area of imminent extreme winds associated with a major hurricane (Category 3 or greater). These warnings indicate a very significant threat of casualties and are usually valid for two hours or less.

OTHER ALERTS

Because tropical storms and hurricanes encompass several types of hazards, NWS may issue additional watches and warnings as a result of the storm, including alerts for flash floods, tornadoes, and floods. Tune in to NOAA Weather Radio All Hazards, local radio, or television for information and to monitor alert notifications.

EVACUATION NOTICE

If the danger is significant, state or local government officials may issue an evacuation notice. Evacuation orders may vary by state and community and range from voluntary to mandatory. When authorities issue a mandatory evacuation notice, leave the area immediately.

PROTECT YOURSELF BEFORE A HURRICANE

TAKE ACTION NOW!

People who live in hurricane-prone coastal areas should know their vulnerability to wind and flooding, as well as what to do to reduce the effects of both. People who live inland from coastal areas may also experience high winds, power outages, and flooding from torrential rain. Protecting yourself today means having sources for information, preparing your home or workplace, developing an emergency communications plan, and knowing what to do when a hurricane is approaching your community. Taking action today can save lives and property.

KNOW

Know your hurricane risk. Your risk from hurricanes is based on where you live, the structure of your home, and your personal circumstances. People who live on the coast are most at risk for extreme winds and flooding from rain and storm surge. People who live inland are at risk for wind, thunderstorms, and flooding. Hurricanes also cause widespread power outages, which may be a risk factor for people who need power-dependent medical devices. Visit <http://hazards.fema.gov/femaportal/prelimdownload> to learn about your property's projected risk to flood hazards.

Know how to stay informed. Receiving timely information about weather conditions or other emergency events can make all the difference in knowing when to take action to be safe.

- Monitor weather reports provided by your local media.
- Many communities have text or email alerting systems for emergency notifications. To find out what alerts are available in your area, do an Internet search with your town, city, or county name and the term "alerts."
- Consider buying a NOAA Weather Radio (NWR) All Hazards receiver, which receives broadcast alerts directly from NWS. You can purchase these at many retail outlets, such as electronics and big box stores, or online. Some NWR receivers are designed to work with external notification devices with visual and vibrating alerts for people who are deaf or hard of hearing. For more information on NWR receivers, visit: www.nws.noaa.gov/nwr/nwrrcvr.htm.
- Think about how you will stay informed if there is a power outage. Have extra batteries for a battery-operated radio and your cell phone. Consider having a hand crank radio or cell phone charger.

Know your evacuation routes; plan your transportation and identify a place to stay. To ensure that you will be able to act quickly should the need arise, you need to plan ahead.

- Know your community's local hurricane evacuation plan and identify several escape routes from your location in case roads are blocked. Include plans to evacuate people with disabilities and others with access and functional needs, as well as pets, service animals, and livestock.
- If you plan to evacuate by car, keep your car fueled and in good condition. Keep emergency supplies and a change of clothes in your car.

- If you will need to share transportation, make arrangements now. If you will need to use public transportation, including paratransit, contact your local government emergency management agency to ask how an evacuation will work, how you will get current information during an evacuation, the location of staging areas, and other information.
- If you will need to relocate for an extended period of time, identify a place away from home where you could go if you had to leave. Consider family or friends who live outside of the local area.
- If you expect to go to a shelter after evacuating, download the American Red Cross Shelter Finder App at www.redcross.org/mobile-apps/shelter-finder-app. This app displays a map of all open American Red Cross shelters, and provides the capacity and the current population of each shelter. You can also text SHELTER + your ZIP code to 43362 (4FEMA) to find the nearest shelter in your area.
- If you have pets and plan to go to a shelter, call to inquire whether the shelter can accommodate your pets. Shelters will accept service animals.

PRACTICE

Practice taking shelter. While you may need to evacuate the area due to a hurricane, there are also situations when you may need to seek protection from hurricane-force winds. Identify your protective location and practice getting all household members to that location quickly. If you do not have access to a Federal Emergency Management Agency (FEMA) safe room or an International Code Council (ICC) 500 storm shelter, use a small, interior, windowless room, such as a bathroom or closet, on the lowest level not likely to flood.

Practice how you will communicate with family members. In a dangerous situation, your first thoughts will be the safety of your family and friends. In case you are not together when authorities issue a tropical storm or hurricane watch, or a tropical storm or hurricane warning, practice how you will communicate with each other. Remember that sending texts is often faster than making a phone call. Keep important numbers written down in your wallet, not just on your phone. It is sometimes easier to reach people outside of your local area during an emergency, so choose an out-of-town contact for all family members to call, or use social media. Decide where the members of your household will meet after the hurricane. Visit www.ready.gov/make-a-plan for instructions on developing a Household Communications Plan.

Practice first aid skills and emergency response actions through training classes. In most circumstances, when someone is hurt, a person on the scene provides the first assistance, before professional help arrives. Learn and practice response skills now so you will know what to do.

- Each year, more than 3 million people gain the skills they need to prepare for and respond to emergencies through American Red Cross training classes, including first aid, automated external defibrillator (AED), and cardio-pulmonary resuscitation (CPR) training. Visit www.redcross.org/take-a-class to find out about classes in your area. Download the American Red Cross First Aid App at www.redcross.org/mobile-apps/first-aid-app.

- The Community Emergency Response Team (CERT) Program expands the emergency response network by providing training in basic response skills to community members. CERT Basic Training educates people about disaster preparedness for hazards that may negatively affect their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Visit www.fema.gov/community-emergency-response-teams to find your local program.

STORE

Store supplies so you can grab them quickly if you need to evacuate; know in advance what else you will need to take. Take time now to make a list of the things you would need or want to take with you if you had to leave your home quickly. Store the basic emergency supplies in a “Go Bag” or other container. Be ready to grab other essential items quickly before leaving. Remember to include specialized items for people with disabilities and others with access and functional needs, such as older adults, children, and those with Limited English Proficiency.

When making your list, consider the **Five Ps of Evacuation**:

PEOPLE	PRESCRIPTIONS	PAPERS
People and, if safely possible, pets and other animals or livestock	Prescriptions, with dosages; medicines; medical equipment; batteries or power cords; eyeglasses; and hearing aids	Papers, including important documents (hard copies and/or electronic copies saved on external hard drives or portable thumb drives)
PERSONAL NEEDS	PRICELESS ITEMS	
Personal needs—such as clothes, food, water, first aid kit, cash, phones, and chargers—and items for people with disabilities and others with access and/or functional needs, such as older adults, children, and those with Limited English Proficiency	Priceless items, including pictures, irreplaceable mementos, and other valuables	

Store supplies you will need to live at home with no power. Even if you are in an area that was not asked to evacuate, you may still lose power and the water supply to your home. Depending on the strength of the hurricane and its impact on your community, you could be in your home with no power or other basic services for several weeks. Think about items you require for this situation. Keep these supplies on hand in your home. For a full list of supplies for your emergency supply kit, visit www.ready.gov/build-a-kit.

Here are some suggestions to consider:

- Flashlight and radio, either hand-cranked or battery-powered, with extra batteries;
- At least 1 gallon of water per person per day for at least 3 days. A normally active person needs about three-quarters of fluid daily, from water and other beverages. Water is also needed for food preparation and sanitation;
- At least a 3-day supply of non-perishable food for members of your household, including pet food and considerations for special dietary needs. Include a non-electric can opener for canned food;
- First aid kit, medications, and medical supplies; and
- Battery backup power for power-dependent mobility devices, oxygen, and other assistive technology needs.
- Sleeping bag or warm blanket for each person, if you live in a cold-weather climate.

Store the important documents you will need to start your recovery.

Review your homeowners or renters insurance policy and also prepare or update a list of your home's contents by taking pictures or videotaping each room in the house. If your home or business sustains significant damage, you will need access to insurance and rental or mortgage agreements to file a claim or request assistance from the government. During recovery, you may also need access to personal information such as medical insurance, and prescriptions or warranties for durable medical equipment. The Emergency Financial First Aid Kit (EFFAK) can help you identify the records you should keep safe. This document is available at www.ready.gov/financialpreparedness. Store your records safely. Keep papers in a fireproof, waterproof box. If records are stored electronically, keep a backup drive in your fireproof, waterproof box, or store files using a secure cloud-based service.

PROTECT

Protect your property and manage your risk. If you live in a hurricane-prone coastal area or in an inland area where heavy rains from a downgraded hurricane might pass, take steps now to protect your property from both high wind and water damage. This includes buying specialized insurance for losses caused by flood and wind damage.

DISCUSS

Discuss what you have done to prepare with your family, friends, neighbors, and colleagues. Talking about preparedness with others will help you think through your plans, share information about alerts and warnings, and share tips for protecting property. Talking about disasters and helping others prepare makes everyone safer.

Discuss how your community can reduce risk. Work with others in your community to improve community resilience planning. Support your community's participation in the Community Rating System of the National Flood Insurance Program and examine how building codes or land-use planning could improve the community's resilience. Work with others to request evaluations of Best Available Refuge Areas in public locations and pursue community investments for FEMA safe rooms and ICC 500 storm shelters. For more information on mitigation options for reducing your community's risk, see *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* at www.fema.gov/media-library/assets/documents/30627?id=6938.

PROTECT YOURSELF DURING A HURRICANE

Hurricanes have the potential to cause massive destruction. If you are in the path of a major hurricane, authorities may direct you to evacuate for your safety.

EVACUATE

- Fatalities and injuries caused by hurricanes are often the result of individuals remaining in unsafe locations during a storm. If authorities advise or order you to evacuate, do so immediately. Be sure to remember the **Five Ps of Evacuation**: People, Prescriptions, Papers, Personal Needs, and Priceless Items.
- Leave early to avoid delays caused by long lines, high winds, and flooding.
- Follow posted evacuation routes and do not try to take short cuts because they may be blocked. Stick to designated evacuation routes.

IF YOU ARE IN AN AREA WITHOUT AN EVACUATION NOTICE

Take precautions to protect yourself and stay safe from the high winds and potential localized flooding.

- Stay indoors away from windows and glass doors. Flying debris from high winds is dangerous and can be deadly. If you are in a mobile home or temporary structure, move to a sturdy building.
- For protection in extremely high winds, go to a small, interior, windowless room, such as a bathroom or closet, on the lowest level not likely to flood.
- If you are in an area that is flooding (e.g., on the coast, on a floodplain, near a river, or on an island waterway), move to a location on higher ground before floodwaters prevent your ability to leave.
- If the power is out, use flashlights, not candles. Turn on a battery-operated or hand-cranked radio to get the latest emergency information. Stay tuned to alerts.

EXPERIENCING A HURRICANE

You may experience any of the following during a hurricane:

- Long periods of very strong winds and heavy rains.
- If you are in a coastal area, you may experience a storm surge, which means that high winds are pushing seawater onto the shore. A storm surge combines with the ocean's tide to produce a storm-tide surge. Storm-tide surges have been registered as high as 35 feet above normal sea level and can cause significant flooding across a large area. This generally occurs over a short period, typically 4 to 8 hours; but in some areas, it may take much longer for the water to recede to its pre-storm level.
- Significant changes in air pressure during the storm can cause discomfort, and loud moaning, shrieking, and whistling sounds may occur because of the winds.
- Many of those in the center of the storm experience a false sense of security. After the center of the hurricane, also known as the eye, passes over, the storm will resume. Do not venture outside until emergency officials say it is safe.

PROTECT YOURSELF AFTER A HURRICANE

IF YOU EVACUATED

- Return home only when authorities indicate that it is safe to do so.
- Be aware of areas where floodwaters have receded. Do not attempt to drive through flooded areas. Roads and bridges may have weakened and could collapse under the weight of a car.
- Be aware of downed trees, power lines, and fallen debris.

IF YOU STAYED IN THE AREA OR AS YOU RETURN

Listen to official public information to get expert, informed advice as soon as it is available. Use the following considerations and precautions:

INSIDE SAFETY

- If the storm damaged your home severely, you may only be able to enter when officials say it is safe to do so. Stay out of any building surrounded by floodwaters.
- Use extreme caution when entering flooded buildings. There may be hidden damage, particularly in foundations. Personal safety considerations include protecting yourself from electric shock, mold contamination, asbestos, and lead paint. Turn off electricity at main breaker or fuse box. Homeowners who are unfamiliar with electricity or their home's electrical systems should contact their local power company or a qualified electrician to assist them in making their property safe from electrical hazards after a flood. Check for loose boards and slippery floors.
- Do not touch electrical equipment if it is wet or you are standing in water. Shut off the utilities to a flooded home or building.
- Use flashlights, not lanterns, torches, or matches, to examine buildings. Flammable gases may be inside and open flames may cause a fire or explosion.
- If you turned off your gas, ask a licensed professional to turn it back on.
- Carbon monoxide kills. Use a generator or other gasoline-powered machine ONLY outdoors and away from windows so fumes do not get inside. The same goes for camping stoves. Fumes from charcoal are also deadly; cook with charcoal ONLY outdoors. For more information, visit the U.S. Centers for Disease Control and Prevention's website on preventing carbon monoxide poisoning at <http://emergency.cdc.gov/disasters/cofacts.asp>.

OUTSIDE SAFETY

- If you see floodwater on roads, walkways, bridges, and on the ground, do not to attempt to cross floodwater. The depth of the water is not always obvious, and the road bed may be washed out under the water. Moving water has tremendous power. Six inches of moving water has the potential to knock you off your feet, and a foot of water can sweep a vehicle—even a large SUV—off of the road. Be especially cautious at night when it is harder to recognize flood dangers. For more information on floodwater hazards, visit the NWS Turn Around Don't Drown® program at <http://tadd.weather.gov/>.
- Avoid wading in floodwater, which may be contaminated with oil, gasoline, or raw sewage.
- Watch for dangerous debris (e.g., broken glass, metal fragments), dead animals, or venomous snakes in floodwaters. Before walking through debris, use a stick to check for hidden dangers. Underground or downed power lines may electrically charge the water.

- Stay away from downed power lines and report them to 911 or the power company's emergency number.
- Stay away from damaged areas unless police, fire, or relief organizations request your assistance.

COMMUNICATIONS

- Use local alerts, radios, and other local information sources, such as American Red Cross apps, to get information and advice as soon as it is available.
- Use text messaging or social media to communicate with family and friends. Telephones and cellular phone systems are often overwhelmed following a disaster, so use phones only for emergency calls.

HEALTH AND SANITATION

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Service damaged septic tanks and leaching systems as soon as possible. A damaged sewage system is a serious health hazard.
- Have wells checked for contamination from bacteria and chemicals.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage, bacteria, and chemicals. Be careful and wear appropriate protective equipment like gloves, safety glasses, and face masks. Follow five basic steps for post-flood building restoration, including (1) air out, (2) move out, (3) tear out, (4) clean out, and (5) dry out. Seek professional services and/or guidance before attempting to repair flood-damaged property.
- Throw out any food, including canned items, that was not maintained at a proper temperature or has been exposed to floodwaters. Do not eat food from a flooded garden. When in doubt, throw it out.
- Remove and replace drywall or other paneling that was underwater. Use a moisture meter to make sure that the wooden studs and framing are dry before replacing drywall. Mold growth in hidden places is a significant health hazard.

CARE FOR LOVED ONES

Look for signs of depression or anxiety related to this experience, such as feeling physically and mentally drained; having difficulty making decisions or staying focused; becoming easily frustrated on a more frequent basis; feeling tired, sad, numb, lonely, or worried; or experiencing changes in appetite or sleep patterns. Seek help from local mental health providers if you detect these signs in yourself or others.

INSURANCE

Photograph damage to your property and contact your insurance agent. Do what you can to prevent further damage (e.g., putting a tarp on a damaged roof) that insurance may not cover.

PROTECT YOUR PROPERTY

WIND

The best way to reduce the risk of damage to a structure from hurricane winds is to reinforce or strengthen the building. Where available, you may also purchase high-wind insurance policies.

Windows are particularly vulnerable components on most structures. Impact-resistant glazing or permanent storm shutters offer the best protection for windows. A second option is to laminate the glass with a thin film to keep the glass from shattering. You can also board up windows with 5/8-inch plywood, cut to fit and ready to install. Tape does not prevent windows from breaking. Numerous manufacturers produce certified storm-resistant window and door products. Also reinforce garage doors against direct wind effects by using storm-resistant doors or by retrofitting existing doors with commercially available products.

Roof failures commonly cause major damage to buildings and their contents. Metal brackets and straps can strengthen the connections between the roof and wall systems. Brackets and straps should be attached at the studs and rafters, not to the plywood sheathing. The entire structure can be bolted to its foundation using anchor bolts along the foundation sill.

When a hurricane is forecast for your area, you should remove or secure items that are typically outside. Bring patio furniture, garden tools, garbage cans, and toys inside. Trim or remove trees close enough to fall on the building. Anchoring storage sheds and other outbuildings helps prevent them from becoming flying debris. Anchor objects that are unsafe to bring inside, like gas grills or propane tanks.

FLOOD

Take steps to protect your property from flood damage.

- Talk to your insurance agent about buying flood insurance. Flood insurance is available for homeowners, renters, and business owners. Because homeowners insurance policies do not typically cover flood losses, you will need to purchase separate flood insurance if your property is at risk for flooding. Visit www.floodsmart.gov/floodsmart/pages/flooding_flood_risks/defining_flood_risks.jsp for an estimate of what flood insurance may cost for your property address. A policy purchased today will take effect in 30 days, so act now.
- Elevate the heating system (furnace), water heater, and electric panel if the location is susceptible to flooding.
- Install “check valves” in sewer lines to prevent floodwater from backing up into the drains of your home.
- Waterproof the basement.
- Install sump pumps with battery backup.
- If you live in a flood-prone area, stockpile emergency building materials (e.g., plywood, plastic sheeting, lumber nails, a hammer and saw, a pry bar, shovels, and sandbags).
- In areas with repetitive flooding, consider elevating the building.
- Keep gutters and drains free of debris.

SAFFIR-SIMPSON HURRICANE WIND SCALE

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and property damage. Category 1 and 2 storms are still dangerous, however, and require preventative measures. In the western North Pacific, the term "super typhoon" is used for tropical cyclones with sustained winds exceeding 150 mph.

CATEGORY	SUSTAINED WINDS	TYPES OF DAMAGE DUE TO HURRICANE WINDS
1	74-95 mph 64-82 knots 119-153 km/hr	These very dangerous winds will produce some damage: Well-constructed framed 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 for a few hours to several days.
2	96-110 mph 83-95 knots 154-177 km/hr	These extremely dangerous winds will cause extensive damage: Well-constructed framed homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and could block numerous roads. Near-total power loss is expected with outages that could last for several days to weeks.
3 (major)	111-129 mph 96-112 knots 178-208 km/hr	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 knots 209-251 km/hr	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 for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 knots or higher 252 km/hr 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.

RESOURCES

If you would like more information, the following resources may be helpful.

- FEMA *Against the Wind: Protecting Your Home From Hurricane and Wind Damage*: www.fema.gov/media-library/assets/documents/2988?id=1641
- FEMA *Community Hurricane Preparedness Training*: www.training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=is-324.a
- FEMA *Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Buildings in Coastal Areas* (Fourth Edition): www.fema.gov/media-library/assets/documents/3293?id=1671
- FEMA *Design and Construction Guidance for Community Safe Rooms*: www.fema.gov/media-library/assets/documents/3140?id=1657
- FEMA *Home Builder's Guide to Coastal Construction*: www.fema.gov/media-library/assets/documents/6131
- FEMA *Homeowner's Guide to Retrofitting: Six Ways to Protect Your Home From Flooding*: www.fema.gov/media-library/assets/documents/480
- FEMA *Safety Tips for Hurricanes: Publication for Teachers and Parents for Presentation to Children*. To order, call 1-800-480-2520.
- FEMA *Taking Shelter From the Storm: Building a Safe Room in Your Home or Small Business*: www.fema.gov/media-library/assets/documents/2009?id=1536
- FEMA *Wind Retrofit Guide for Residential Buildings*: www.fema.gov/media-library/assets/documents/21082
- FloodSmart: www.floodsmart.gov/floodsmart
- Institute for Business and Home Safety *Protect Your Home Against Hurricane Damage*: www.disastersafety.org/hurricane
- National Hurricane Center: www.hurricanes.gov
- NOAA, Marine Safety: www.nhc.noaa.gov/prepare/marine.php
- NOAA, Tropical Cyclone Preparedness: www.nws.noaa.gov/os/hurricane/resources/TropicalCyclones11.pdf
- Ready: www.Ready.gov/hurricanes
- Substance Abuse and Mental Health Services Administration (SAMHSA), *Disaster-Specific Resources: Annotated Bibliography*: www.samhsa.gov/dtac/dbhis/dbhis_specific_bib.asp#disaster