

Wayne County Office of Emergency Services

Hurricane Awareness

Hurricane Basics

Hurricanes need the right ingredients in order to form. These include warm tropical water, atmospheric moisture, and light winds aloft. When areas of disturbed weather in the atmosphere experience these ingredients, they can combine to produce tropical storms and hurricanes with violent winds, incredible waves and torrential rains.

A hurricane is a type of tropical cyclone, which is a generic term for low-pressure systems that develop over the tropics. Tropical cyclones are classified as follows:

Tropical Depression – Depressions are organized areas of low-pressure resulting in a system of clouds and thunderstorms with a defined surface circulation. Tropical depressions are defined as having maximum sustained winds of 38 mph or less.

Tropical Storms – tropical storms are better organized systems of strong thunderstorms with a defined area of low-pressure and winds of 39-73 mph.

Hurricanes – Hurricanes are intense tropical systems with a well-defined surface circulation with maximum sustained winds of 74 mph or greater.

High Winds

The intensity of a land falling hurricane is expressed in term of categories that relate to wind speed and potential damage. A category 1 hurricane, on the Saffir-Simpson Hurricane Scale, has lighter wind when compared to higher category hurricanes. Category 4 hurricanes, like Hurricane Hazel and Hugo, would have winds between 131-155 mph and would be expected to cause 100 times more damage than a category 1 hurricane. The strongest winds usually occur on the right side of the eyewall of the hurricane. Wind speeds generally decrease significantly with 12 hours after landfall. The Saffir-Simpson Hurricane Scale is:

Category 1	74 – 95 mph winds
Category 2	96 – 110 mph winds
Category 3	111 – 130 mph winds
Category 4	131 – 155 mph winds
Category 5	Greater than 155 mph winds

Inland Flooding

Inland flooding is one of the most serious and deadly threats hurricanes bring to North Carolina. Most hurricane deaths over the past 30 years have been the result of inland flooding. During the past 30 year period more than half (59%) of all U.S. tropical cyclone deaths have occurred from inland freshwater flooding. Nearly 78 percent of all children killed by tropical cyclones drown in these freshwater floods. At least 23 percent of all flooding deaths have occurred in automobiles as people attempt to drive through flooded areas where water covers the road. The hurricanes rainfall intensity is not directly related to the strength of the tropical storm or hurricane. Weak hurricanes and even tropical storms have caused disastrous floods throughout history.

Being Prepared

Preventing the loss of life and minimizing the damage to property from hurricanes are responsibilities that are shared by everyone. If you are asked to evacuate, you should do so without delay. But unless you live in a coastal or low-lying area, an area that floods frequently, or in manufactured housing, it is unlikely that emergency managers will ask you to evacuate. That means that it is important for you and your family to **HAVE A PLAN** that makes you as safe as possible in your home. Disaster prevention includes modifying your home to strengthen it against storms so that you can be as safe as possible. It also includes having the supplies on hand to weather the storm. The suggestions provided here are only guides. You should use common sense in your disaster prevention.

DEVELOP A FAMILY PLAN - Your family's plan should be based on your vulnerability to hurricane hazards including high wind, flooding, and tornadoes and falling trees. In a disaster you should plan to be able to provide for yourself and your family for 5 days without utility services or aid. Share your plan with other friends or family. Locate a safe room or the safest areas in your home for each hurricane hazard. In certain circumstances the safest areas may not be your home but within your community. Determine escape routes from your home and places to meet. Have an out-of-state friend as a family contact, so all your family members have a single point of contact. Make a plan now for what to do with your pets if you need to evacuate. Check your insurance coverage - flood damage is not usually covered by homeowners insurance. Stock non-perishable emergency supplies and a Disaster Supply Kit.

Before the Storm

Every year, prior to hurricane season, your family should review your hurricane plan and make changes as necessary. It should include, **if you plan to evacuate, where you will go, the route you will take to get there, when you will leave, and what supplies you will take.**

If you plan to stay, make sure you have all of the supplies necessary to be on your own for at least 72 hours. If you are planning to go to an evacuation shelter, have your shelter supplies kit packed and ready. Make sure you have all the materials on hand to protect your home. You should also trim dead wood from trees. Don't forget to make arrangements for pets.

If the storm is threatening the area, you should listen to local media for information and actions to be taken. In addition, you should:

- Fuel your car. You will need it to evacuate and pumps don't work without electricity.
- Bring in outdoor objects such as lawn furniture, toys, and garden tools.
- Install your storm shutters or cover windows with plywood and secure all doors.
- Prepare boats as appropriate.
- Turn up refrigerators and freezers to the highest settings.
- Turn off small appliances that are not needed.
- Turn off LP tanks.
- Call an out-of-town friend or relative to let them know of your plans.
- Fill sinks and bathtubs with water.
- Get an extra supply of cash. Banks and ATM's may not be operational immediately after the storm.

When tracking a storm, remember that a hurricane is not just a point on a map. Usually the coordinates of the center of the storm are given so that you can track it on your map. However,

hurricanes can have tropical storm force winds over 200 miles from that center and even hurricane force winds over 75 to 100 miles away from the center. We must remember that hurricane forecasting is not an exact science and they don't always go where predicted.

During the Storm

If you stay home during a hurricane, you should take the following precautions in addition to those mentioned above as the storm approaches:

- Stay away from windows and doors, even if they are covered.
- Take refuge in a small interior room, closet, hallway, or basement if available. If you live in a two-story home, choose a room on the first floor.
- Close all interior doors and brace exterior doors if possible.
- Lie on the floor under a table, or another sturdy object. Some protection is afforded by covering with a mattress during the height of the storm.
- If the eye of the storm passes over, it will be calm for a short period of time. **REMAIN INDOORS!** As soon as the eye passes over, winds will increase rapidly to hurricane force from the opposite direction.
- Remain calm. It may take several hours for the storm to pass.

After the Storm

There will be many hazards outdoors after the storm. With the safety of yourself and others in mind, the following should be considered:

- Keep listening to your local radio or TV stations for information.
- If you evacuated, return home only when authorities advise that it is safe.
- Drive only if it is absolutely necessary. Immediately following the passage of the storm, debris may be covering roadways making them impassable. Emergency crews will be working to clear roadways, but it may take ours or even days to clear them all. Avoid sightseeing. Roads may be closed for your protection. So if you encounter a barricade, turn around and go another way.
- Do not drive in flooded areas. Avoid weakened bridges and washed out roadways.
- Stay on firm ground. Moving water only six inches deep can sweep you off your feet. Standing water may be electrically charged from downed power lines.
- Beware of downed power lines. Lines may be charged and dangerous.
- Beware of snakes, insects, or animals driven to higher ground by flood waters.
- Enter your home with extreme caution. Beware of fallen objects or damaged roof and wall sections.
- Remove shutters or plywood and open windows and doors to ventilate or dry your home if necessary.
- Check gas, water, and electrical lines and appliances for damage. **Do not** attempt to repair damaged gas or electrical lines. Call a professional.
- Do not drink or prepare food with tap water until you are certain it is not contaminated.
- Avoid using candles or other open flame indoors. Use a flashlight or other battery powered lighting.
- Use the telephone to report emergencies only. This includes cellular phones.
- Be especially cautious when using a chainsaw to cut fallen trees.
- Never connect portable generators to your house. Use them only to run necessary appliances and plug the appliances into the generator.

Disaster Supply Kit

The emergency preparedness kits should include supplies that may be needed to have available when an emergency or disaster occurs. No kit can provide all the supplies that individuals may need in an emergency, so your kit should be customized based on your own personal needs. Refer to the following checklist as a guide:

Clothing and Bedding

- At least one complete change of clothing and footwear per person
- Sturdy shoes or work boots
- Rain gear
- Blankets or sleeping bags
- Hat and gloves
- Thermal Underwear

Tools and Supplies

- Flashlight and extra batteries
- Mess kit, or paper cups, plates and plastic utensils
- Cash, traveler's checks, change
- Non-electric can opener
- Tent
- Pliers
- Tape
- Matches in a waterproof container
- Aluminum Foil
- Paper, pencil
- Needle, thread
- Medicine Dropper
- Shut-off wrench (to turn off household gas and water)
- Plastic sheeting
- Map of area
- Battery operated radio (extra batteries)
- Whistle
- Plastic storage containers

Sanitation

- Toilet paper
- Soap, liquid detergent
- Feminine supplies
- Plastic garbage bags, ties
- Plastic bucket with tight lid
- Disinfectant
- Household Chlorine bleach
- Hand sanitizer

Water

- Store one gallon of water per person per day

Food

- Ready-to-eat canned meats, fruits and vegetables
- Canned juices, milk, and soup (if powdered, store extra water)
- High energy foods – peanut butter, jelly, crackers, granola bars
- Vitamins
- Comfort/stress foods – cookies, hard candy, sweetened cereals

Special Items

- Medications (both prescription and non-prescription) that you take
- Extra eyeglasses
- Important family documents (in a waterproof container)
 - Will, insurance policies, contracts, deeds, stocks and bonds
 - Passports, social security cards, immunization records
 - Bank account numbers
 - Credit card account numbers and companies
 - Inventory of valuable household goods, important telephone numbers
 - Family records (birth, marriage, death certificates)
- Entertainment – games and books
- Supplies for persons with special needs, such as infant, elderly, or disabled persons
- Family or workplace disaster plan