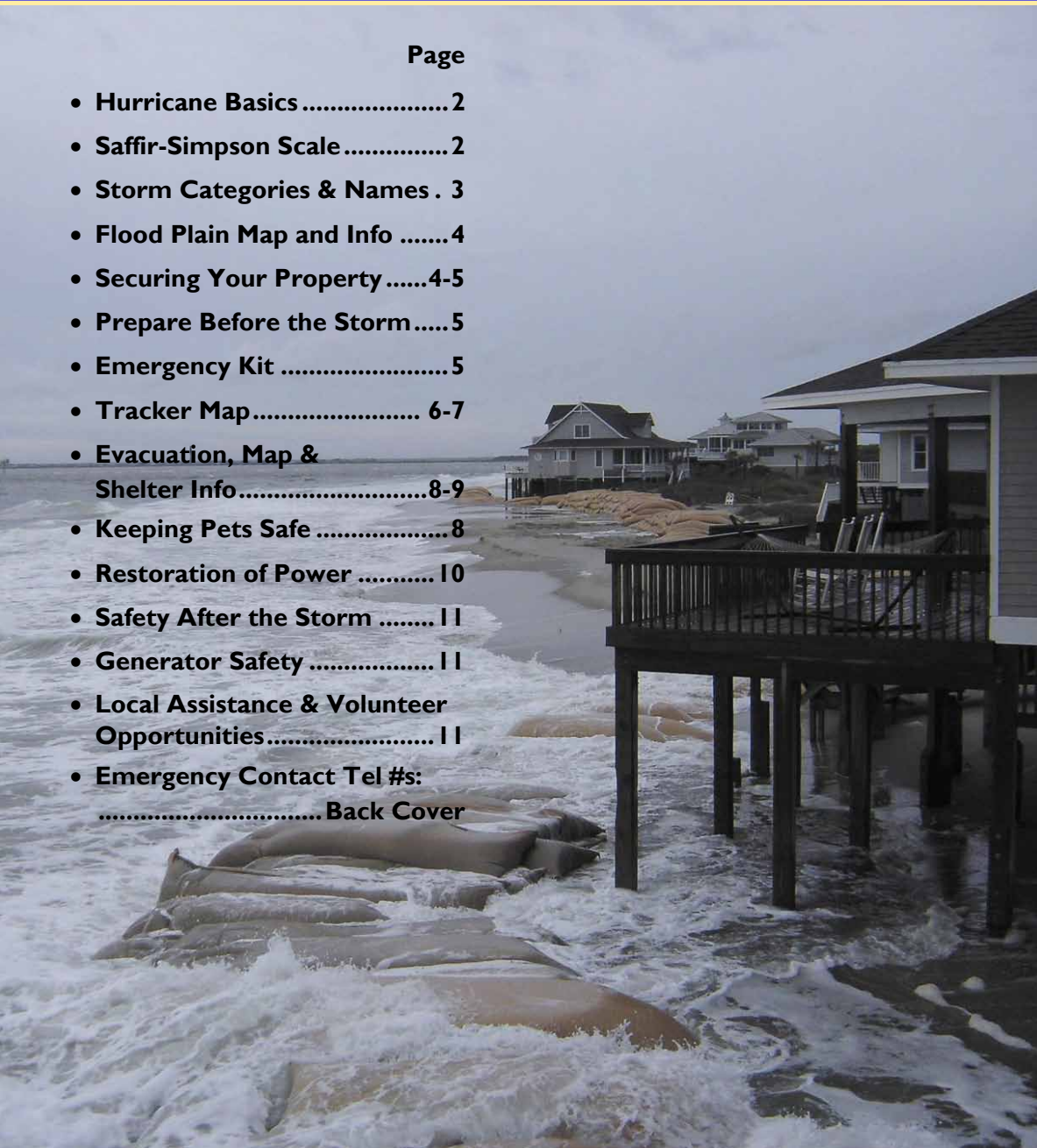


# Hurricane Survival Guide

*Tips to keep your family, pets and property safe*

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## The Basics of Hurricanes

Hurricanes are tropical cyclones that rotate counterclockwise with wind speeds in excess of 74mph.

Most hurricanes form over warm seas near the equator. They are created when the sun heats the ocean surface, causing heated water vapor to rise, condense, and form clouds. These clouds begin to spiral as the earth rotates. More air is pulled underneath and a large vortex is formed.

On average, six Atlantic hurricanes develop each year. When a hurricane moves toward coastal areas it often causes severe damage. Strong winds create storm surges, floods, rip tides and even spawn tornadoes. As the hurricane moves forward, its right front quadrant is typically where the most devastation occurs.



## Saffir-Simpson Hurricane Scale

The National Oceanic and Atmospheric Administration uses this disaster potential scale. There are five categories, one being the least potential damage and five being the worst. Every hurricane is a potential threat to life and property. The category of the storm does not directly relate to the damage it will inflict. It is imperative to take every storm in a serious manner.

CATEGORY	WINDS	STORM SURGE	EFFECTS
<b>1</b>	74 - 95 mph	4 - 5 ft	Minor to moderate damage to building structures. Damage primarily to unanchored mobile homes, shrubbery and trees. Also there may be coastal road flooding and minor pier damage.
<b>2</b>	96 - 110 mph	6 - 8 ft	Possible roofing material, door and window damage to buildings. Considerable damage to vegetation, mobile homes and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of center. Small craft in unprotected anchorages break moorings.
<b>3</b>	111 - 130 mph	9 - 12 ft	Structural damage may occur to small residences and utility buildings with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain continuously lower than 5 ft above sea level may be flooded inland 8 miles or more. Evacuation of residential areas near shore may be required.
<b>4</b>	131-155 mph	13 - 18 ft	More extensive curtainwall failures with possible complete roof structure failure on small residences. Major erosion of beach areas. Major damage to lower floors of structures near the shore. Terrain continuously lower than 10 ft above sea level may be flooded, requiring massive evacuation of residential areas inland as far as 6 miles.
<b>5</b>	Over 155 mph	19 - 25 ft	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 miles may be required.

## Storm Terminology

By international agreement, *Tropical Cyclone* is the general term for all cyclone circulations (low pressure systems) originating over tropical waters. The cyclone is accompanied by thunderstorms and, in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface.

Tropical depressions are numbered consecutively beginning June 1. A name is assigned when constant wind velocity exceeds 39 mph and the depression is upgraded to a tropical storm.

**Tropical Depression:** A tropical cyclone with maximum sustained winds of 38mph or less. Depressions are a system of clouds and thunderstorms that can produce heavy rain.

**Tropical Storm:** A tropical cyclone with maximum sustained winds of 39 to 73mph. A collection of clouds and severe thunderstorms that can cause flooding and spawn tornadoes.

**Tropical Storm Watch:** Tropical Storm conditions are possible in the specified area of the Watch, usually within 48 hours.

**Tropical Storm Warning:** Tropical Storm conditions are possible in the specified area of the Warning, usually within 36 hours.

**Hurricane:** A tropical cyclone with maximum sustained winds of 74mph or higher.

**Hurricane Watch:** Hurricane conditions are possible in the specified area of the Watch, usually within 48 hours.

**Hurricane Warning:** Hurricane conditions are expected in the specified area of the Warning, usually within 36 hours.

**Storm Surge:** An abnormal rise of the sea along a shore as the result, primarily, of the winds of a storm.

**Flash Flood Watch:** Flash flood conditions are possible within the designated watch area—be alert!

## Hurricane Names

The naming of hurricanes was started so that storms could be easily referenced without having to use measures of longitude and latitude. This made communication faster and less prone to error for forecasters, storm trackers and the general public. In 1953 the nation's weather services began using female names instead of the phonetic alphabet. Male names were added in 1979 for storms in the Atlantic and Gulf of Mexico.

### Hurricane Names for the Atlantic Ocean & Gulf of Mexico

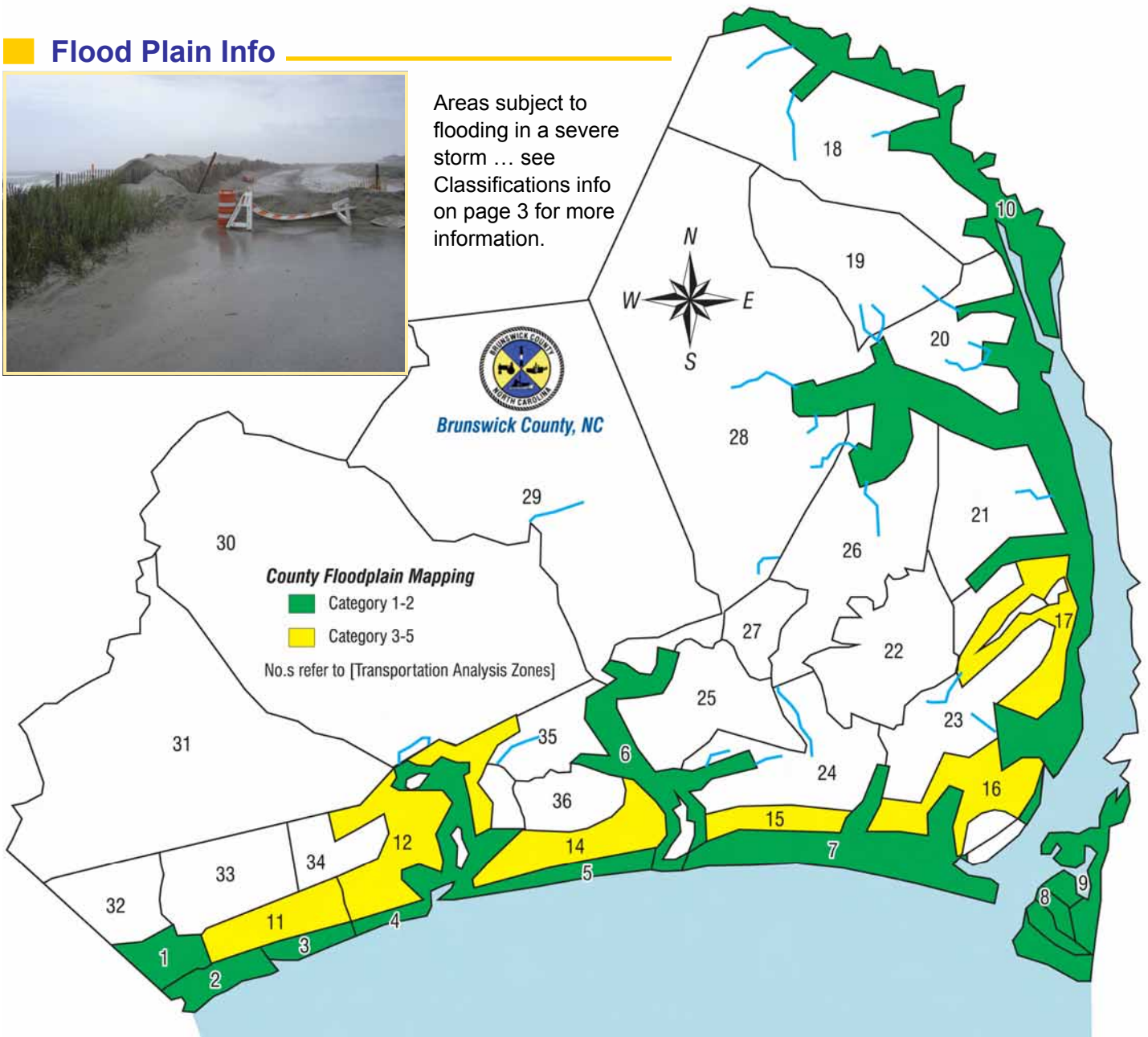
2010	2011	2012	2013
Alex	Arlene	Alberto	Andrea
Bonnie	Bret	Beryl	Barry
Colin	Cindy	Chris	Chantal
Danielle	Don	Debby	Dorian
Earl	Emily	Ernesto	Erin
Fiona	Franklin	Florence	Fernand
Gaston	Gert	Gordon	Gabrielle
Hermine	Harvey	Helene	Humberto
Igor	Irene	Isaac	Ingrid
Julia	Jose	Joyce	Jerry
Karl	Katia	Kirk	Karen
Lisa	Lee	Leslie	Lorenzo
Matthew	Maria	Michael	Melissa
Nicole	Nate	Nadine	Nestor
Otto	Ophelia	Oscar	Olga
Paula	Philippe	Patty	Pablo
Richard	Rina	Rafael	Rebekah
Shary	Sean	Sandy	Sebastien
Tomas	Tammy	Tony	Tanya
Virginie	Vince	Valerie	Van
Walter	Whitney	William	Wendy



## Flood Plain Info



Areas subject to flooding in a severe storm ... see Classifications info on page 3 for more information.



## Avoid Property Loss from a Hurricane

Some low-cost mitigation measures you can take to protect yourself and your home from losses from Wind and/or Flooding:

- Analyze your home's structural weaknesses.
- If you are building a new home, consider a hip roof with a pitch of 30 degrees or less.
- Install storm shutters to protect windows.
- Install braces to give additional support to garage doors.
- Plant vegetation to serve as wind breaks.
- Buy flood insurance.
- Move valuables and appliances out of the basement.
- Make sure that any flood-proofing efforts are in compliance with the minimum NFIP requirements, and with state and local building codes.

## Be Prepared!

- Is your disaster supplies kit ready? (see list)
- Gas up your vehicles
- Have your evacuation plan ready
- Secure loose items outside of your home
- Frequently check on the progress of the storm
- Check batteries and stock up on canned food, first-aid supplies, drinking water and medications
- Store valuables and papers in waterproof containers
- Secure your boat
- Inform loved ones as to where you will be during the storm
- Insure your weather radio is in working condition
- Locate your local shelters

## Insurance Matters

The North Carolina Dept of Insurance offers these tips for maximizing your personal safety and minimizing your property & financial losses.

Homeowners should review their insurance policies with their agents.

**Flood insurance** can be obtained by qualifying property owners by contacting your local agent or through the National Flood Insurance Program: 800-638-6620

**The Beach Plan** is a program designed for coastal property owners. It offers coverage for fire, lightening, wind, and hail. Obtain more information by calling 800-662-7048.

Residents living in rental property should consider purchasing renter's insurance to cover losses of personal property within the rental unit.

If you evacuate, take a copy of your policy with you.

Additional tips for hurricane and storm preparation are also available online at the Department of Insurance's Web site, [www.ncdoi.com](http://www.ncdoi.com) or you may contact the Consumer Services Division of the Department of Insurance toll-free (in state) at 800-546-5664.

## 3-DAY EMERGENCY SUPPLIES KIT

The best time to assemble a three-day disaster supplies kit is well before the storm hits. Many of these are common household items. Store enough supplies for at least 3 days, preferably 7 days.

First, get an easy to carry, water tight container. Next gather up the following items and place them in your kit:

- Water- 1 gallon per person per day (a week's supply of water is preferable) along with a water purification kit or bleach
- First aid kit and first aid book
- Mosquito repellent and sunscreen
- Pre-cooked, non-perishable foods, like canned meats, granola bars, peanut butter, instant soup, cereals, dried fruit, powdered milk, etc.
- Portable camp stove or grill with extra propane
- Non-electric can opener and waterproof lighter
- Paper plates, cups, utensils, paper towels
- Aluminum foil, oven mitts, trash bags
- Baby supplies: formula, bottle, pacifier, diapers, baby wipes, etc.
- Anti-bacterial hand wipes or gel
- Blanket or sleeping bag per person
- Battery operated alarm clock, radio and/or TV with extra batteries
- Flashlight with extra batteries
- Essential medications (& copies of prescriptions)
- Bar soap, toilet articles
- Toilet paper, feminine hygiene supplies
- Cash and change
- Seasonal change of clothing, including sturdy shoes and work gloves
- Cleaning supplies, hand tools, duct tape, rope, etc.
- Documents, backup disks of computer files, medical history info, photo ID
- Camera, books, games, cards, etc.
- Food, water, leash and carrier for pets



## Pets and the Storm

Pets are not allowed in public shelters for health and space reasons, so arrangements need to be made in advance for your pets.

In the event of a disaster, if you must evacuate, the most important thing you can do for your pets is to evacuate them too.

Pets are not allowed at most hotels and motels in North Carolina, so emergency arrangements for them may require careful planning.

- Keep your pet's vaccinations up to date. Pet shelters may require proof of vaccines.
- Keep your pet on a leash with proper identification.
- Have a properly-sized pet carrier for each animal... large enough for the animal to stand and turn around.

Animals brought to a pet shelter are required to have:

- proper identification collar and rabies tag
- proper identification on all belongings
- a carrier
- a leash
- an ample supply of food, water and food bowls
- any necessary medications
- specific care instructions
- newspapers or trash bags for clean-up.

If you must leave your pet behind, prepare an appropriate area for them. Put the pet in a carrier in an interior closet or bathroom with plenty of water, food, toys and blankets.



## Staying Safe

### Evacuation:

- Take your disaster supplies kit
- Bring pillows and blankets
- Have a safe place to go
  - Bring extra cash
  - Enact your pet plan
  - Bring important family documents in a waterproof container
  - Secure your home
  - Follow your County Evacuation Map
  - Don't drive flooded roads
  - Follow officials' instructions
  - Stay away from downed power lines
  - After the threat listen to local officials for the all clear

### If You Stay:

If you are not able to evacuate it is best to stay at a shelter. In the event of a disaster there are shelters set up for those with special medical needs.

If you have a special medical need please visit [www.brunswickes.com](http://www.brunswickes.com) click on the Special Medical Needs button or contact Brunswick County Emergency Services at (910)253-5383. This database is used in the event of a disaster to locate and assist those with special needs.

If you choose to stay at home follow these tips:

- Cover all windows and doors with shutters or other shielding materials
- Have extra cash on hand
- Have a weather radio on hand for frequent updates
- Follow instruction of local officials
- Stay away from windows and doors
- Go to an interior room on the 1<sup>st</sup> floor
- Have a family communication plan

The "eye" of the storm does not mean the storm is over. **Stay inside!**



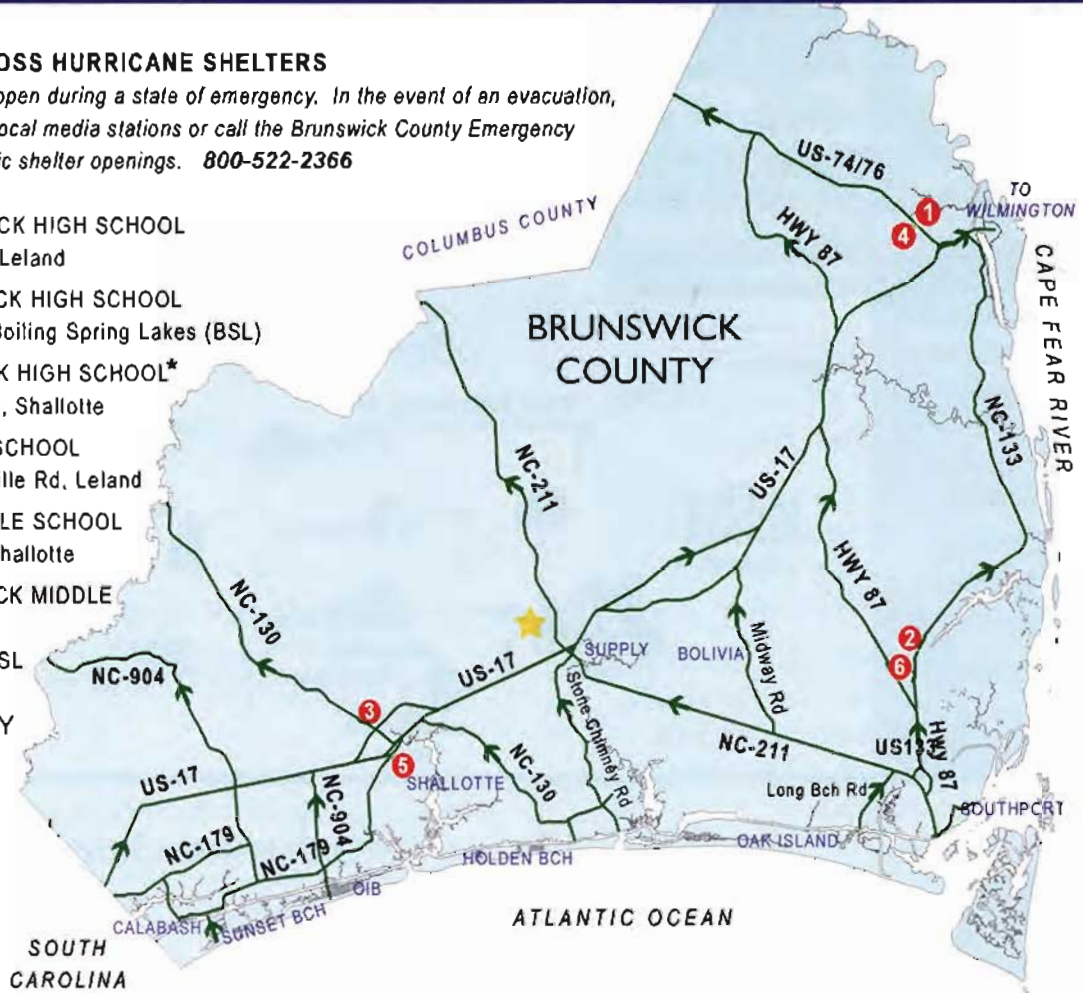
# BRUNSWICK COUNTY Hurricane Evacuation Map - HURRICANE HOTLINE: 800-522-2366

## AMERICAN RED CROSS HURRICANE SHELTERS

Not all shelters may be open during a state of emergency. In the event of an evacuation, please check with your local media stations or call the Brunswick County Emergency Services Dept for specific shelter openings. 800-522-2366

- 1 NORTH BRUNSWICK HIGH SCHOOL  
114 Scorpion Dr, Leland
- 2 SOUTH BRUNSWICK HIGH SCHOOL  
280 Cougar Rd, Boiling Spring Lakes (BSL)
- 3 WEST BRUNSWICK HIGH SCHOOL\*  
550 Whiteville Rd, Shallotte
- 4 LELAND MIDDLE SCHOOL  
927 Old Fayetteville Rd, Leland
- 5 SHALLOTTE MIDDLE SCHOOL  
225 Village Rd, Shallotte
- 6 SOUTH BRUNSWICK MIDDLE SCHOOL  
100 Cougar Rd, BSL

\* PET FRIENDLY



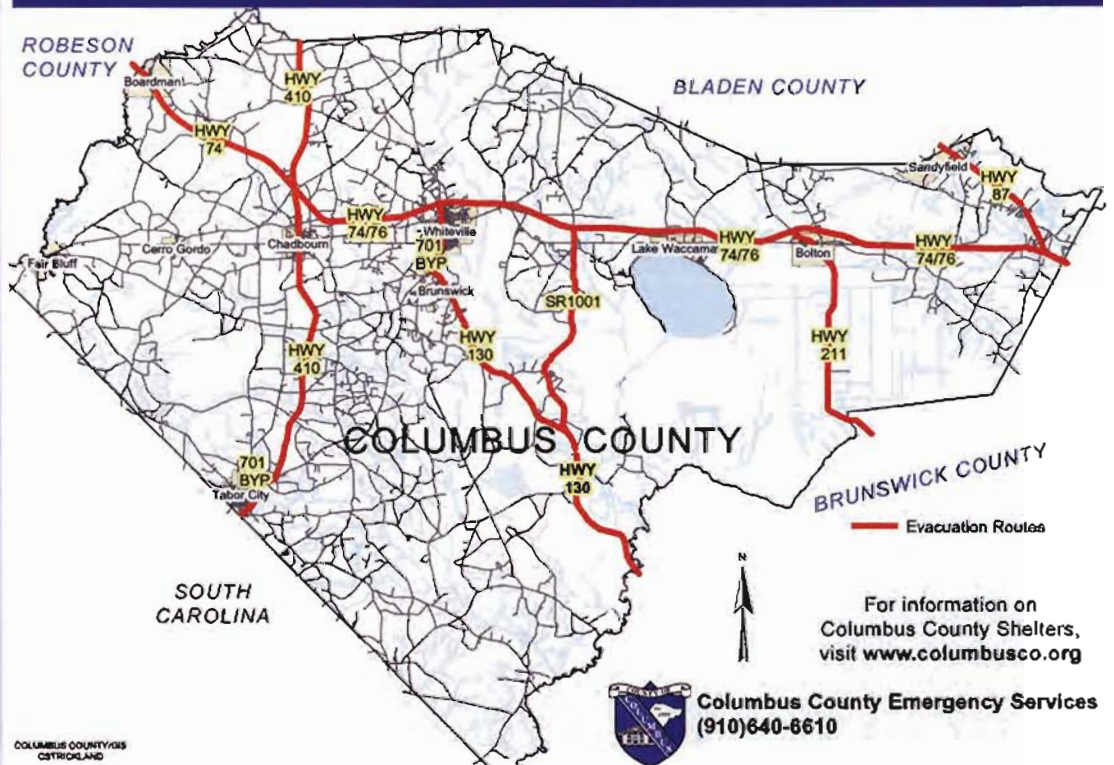
### Evacuate BEFORE you are told to if:

- You live in a mobile home
- You live in a high-rise
- You live on the coast or near water
- You feel you may be in danger

### If an Evacuation is ORDERED:

- Leave at once
- Bring your disaster supply kit
- Follow advised evacuation routes
- Keep away from coastal areas or inland water
- Let others know your plans

## COLUMBUS COUNTY Hurricane Evacuation Map



For information on Columbus County Shelters, visit [www.columbusco.org](http://www.columbusco.org)



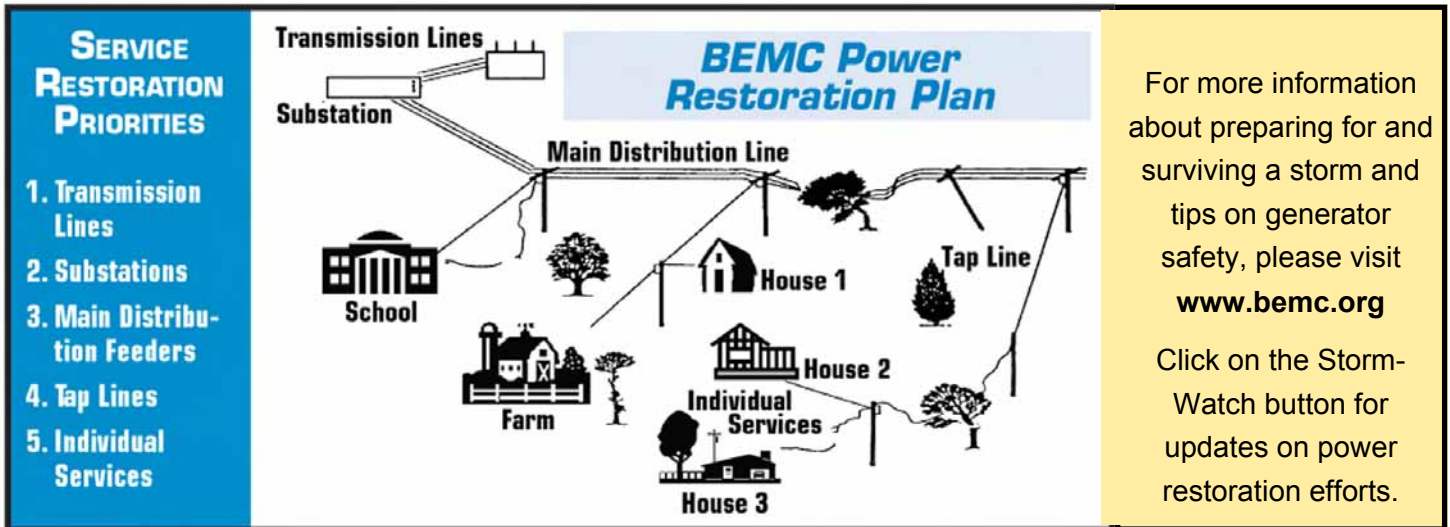
Columbus County Emergency Services  
(910)640-8610

## After the Storm—Restoring Power

After a major storm, BEMC works systematically to restore power to all members with careful attention to the safety of our employees and the public.

After checking and repairing any problems with the transmission lines into our system, we move on to the substations and distribution lines . . . These steps restore power to the greatest number of members.

Next, we tackle the tap lines and then the individual services.



## Safety Reminders

When a hurricane strikes, it often causes widespread power outages. Restoring power after a major outage is a big job that involves much more than simply throwing a switch or removing a tree from a line. Our goal is to restore power SAFELY to the greatest number of people in the shortest time possible.

- Stay clear of trees that may have fallen on power lines.
- Remember, a power outage may effect thousands of other customers, so please be patient as we work to restore your power safely and efficiently.



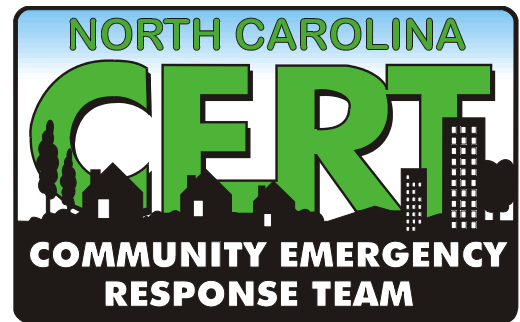
## After the Storm

- Contact local officials to see if it is safe to return
- Check with officials for a safe route to return
- Make sure your residence is safe
- Be cautious of downed power lines
- Follow all instructions of local officials
- Do not drink water until notified that it is safe
- Be cautious of spoiled food
- Take inventory of destroyed and damaged property
- Contact your insurance company

## Generator Safety

Portable generators are a good source of alternate power if an outage occurs, but they should only be used in emergency situations. An improperly installed or operated generator can be deadly!

- Have a qualified, licensed electrician connect it to the home's main electrical supply. Generators are dangerous to work with; power from generators can back-feed along power lines and electrocute anyone who comes into contact with them. Notify your electric supplier before connecting any portable generator.
- Before operating, determine wattage requirements. Never exceed the rated capacity of your generator; overloading can cause serious damage to the generator or appliances. List all of the appliances that are going to operate at the same time, and then determine the starting wattage requirements and the running wattage requirements. The starting load lasts only for a few seconds but is very important when figuring your total wattage to be used.
- Make sure the unit is connected to an appropriate electrical ground, in accordance with the National Electric Code.
- Operate the generator in a clean, dry, well-ventilated area. Make sure your hands are dry, and do not use it in rainy, wet or icy conditions.
- Inspect extension cords before use and replace if they are worn, cut or frayed.
- Use electrically grounded cordsets of the proper size.
- Make sure not to overload the generator.
- Make sure to turn off all of the equipment being powered by the generator prior before turning off the generator.
- Always use generators outdoors and away from doors, windows and vents.
- Never use generators in homes, garages, basements, crawl spaces or other enclosed or partially enclosed areas, even with ventilation.
- Install battery-operated or plug-in (with battery backup) carbon monoxide (CO) alarms in your home. Check the batteries frequently.
- Always store fuel in properly labeled, non-glass containers, away from any fuel-burning appliances. Do not store fuel indoors.



## CERT - COMMUNITY EMERGENCY RESPONSE TEAMS

These team members are trained to take care of themselves and then help others in their communities following a disaster.

CERT training is designed to prepare you to help yourself, your family and your neighbors in the event of a catastrophic disaster, such as a hurricane.

The training covers basic skills that are important to know and by working as a team you can do the greatest good for the greatest number of people in your community.

The Brunswick County Volunteer Center offers you this training.

**If you are interested in being a part of CERT or volunteering in any other capacity during a disaster such as a hurricane, call the Volunteer Center at**

**253-2574 or email [jmathews@brunswickes.com](mailto:jmathews@brunswickes.com)**



# IMPORTANT CONTACT NUMBERS

For Fire, Police and other Emergency Services:

# 911

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## BRUNSWICK COUNTY

[www.brunasco.net](http://www.brunasco.net)

Public Information.....	(910) 253-7453
County Administration .....	(910) 253-2000
Emergency Management.....	(910) 253-5383
EMS .....	(910) 253-5383
Fire Marshal .....	(910) 253-4376
Volunteer Center .....	(910) 253-2574
Public Health .....	(910) 253-2250
Public Utilities.....	(910) 253-2657
Sheriff.....	(910) 253-2777
Red Cross .....	(910) 762-2683
Coast Guard.....	(910) 278-1133 or 278-1144

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## COLUMBUS COUNTY

[www.columbusco.org](http://www.columbusco.org)

Public Information.....	(910) 640-6600
Emergency Management:.....	(910) 640-6610
Public Health .....	(910) 640-6615
Public Utilities.....	(910) 642-5257
Sheriff.....	(910) 642-6551

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## TO REPORT AN ELECTRIC OUTAGE

**Brunswick Electric Membership Corp ..... 1-800-682-5309**

**Progress Energy..... 1-800-419-6356**

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Hurricane Survival Guide brought to you by:

**Brunswick County Emergency Services**

3325 Old Ocean Hwy, Bolivia, NC

800-522-2366 • [www.brunswickes.com](http://www.brunswickes.com)

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