

FLOODING IN CARTERET COUNTY

Brief Overview...

The dominant source of flooding in Carteret County is wind-driven water surge that is generated in the Atlantic Ocean by tropical storms and hurricanes. The surge extends into Bogue Inlet, Bogue Sound, Back Sound, Core Sound, Goose Bay, the Intracoastal Waterway, Pamlico Sound, Shackleford Slue, the Straits, and further extends into Adams Creek, Neuse River, Newport River, and White Oak River. Flooding from heavy rainfall also occurs on Deep Creek and Little Deep Creek.

High winds associated with tropical storms can also produce extremely high waves, which may create a storm surge higher than normal. The wave action during a tidal flood can be much more damaging than the high water level.

North Carolina experiences hurricanes, tropical storms, and severe extra-tropical cyclones, usually referred to as "Northeasters". Unlike a hurricane, which may pass over a coastal location in a fraction of a day, a northeaster may blow from the same direction and over long distances for several days.

Storms, such as Hurricane Ophelia (2005), Hurricane Isabel (2003), Hurricane Floyd (1999), and Hurricane Bonnie (1998), have produced severe floods, as well as extensive structural damage. Hurricane Isabel, a Category Two hurricane, caused damage to approximately 645 homes in Carteret County with 4- to 7-foot storm surges along Core Sound. In September of 2005, Hurricane Ophelia produced over 9 inches of rainfall and wind gusts over 90 mph, resulting in storm surges up to 6 feet in portions of Carteret County.

DID YOU KNOW...

Your Local Planning and Inspections Department has copies of the Flood Insurance Rate Maps, which identify properties subject to a 100-year flood.

NATURAL AND BENEFICIAL FUNCTIONS OF FLOODPLAINS.

Undisturbed floodplains provide a wide range of benefits, such as:

- **Natural flood and erosion control:** provides flood storage and conveyance and reduces flood velocity.
- **Water quality:** filters nutrients and impurities from runoff.
- **Groundwater recharge:** reduces frequency and duration of surface flow.
- **Biological resources:** supports high rate of plant growth, provides breeding and feeding grounds and enhances waterfowl habitat.
- **Societal resources:** provides open space and aesthetic pleasures. Also, in areas of scientific study, provides opportunities for environmental research.

FLOOD SAFETY

BE PREPARED

Before a storm threatens...

- Find out if your home is subject to flooding.
- Learn to recognize the warning signals of your local government.
- Inventory your property & personal belongings.
- Review your insurance policies.
- Familiarize yourself with the Carteret County Hurricane Information Website.
www.carteretcountygov.org/EmergencyServices/hurricane.aspx
- Learn your children's school and/or day-care center's emergency plans.
- Learn your work site's emergency plans.
- Choose an alternate location to meet if an emergency happens while your family is away from home and cannot return.
- Post all emergency plans/phone numbers in a prominent place.

When a Watch is Issued ...

- Stay informed of the latest emergency instructions by listening to local radio and television broadcasts.
- Consider evacuating early to avoid long hours on limited evacuation routes.
- Keep your car fueled should evacuation be necessary.
- If you are advised to evacuate by your local government, do so promptly.

Safety Tips for Buildings...

- Turn off all utilities at the main power switch.
- Close the main gas valve.
- Store important documents in waterproof containers.
- Move valuables to upper floors or higher elevations.
- Board up windows or protect them with storm shutters or tape.
- Bring outdoor possessions inside the house or tie them down securely.
- If you're caught in the house by suddenly rising waters, move to a second floor and, if necessary, to the roof.
- Shut off water and power to all docks and piers.

Always remember to include your pets as part of your evacuation plan.



DID YOU KNOW?

Carteret County has a 'pet friendly' shelter located at the Newport Middle School. To pre-register, please call: (252) 728- 8470. Also, a list of 'pet friendly' hotels can be found on the Department of Emergency Services website.

EVERY FAMILY SHOULD HAVE A FAMILY EMERGENCY PLAN

For more information visit: <http://www.ready.gov/>

Flooding causes more property damage in the United States than any other type of natural disaster.

PROPERTY PROTECTION MEASURES

Things you can do...

Many houses existing today were built when little was known about floods and other hazardous events or how buildings should be protected. Therefore, there are a significant number of existing homes that continue to be susceptible to repetitive flood losses. Recent improvements in construction practices and regulations have made new homes less prone to flood damage.

The Federal Insurance Administration has published a manual that describes various techniques that can be used to permanently flood-proof an existing building. This process is also known as "retrofitting". Retrofitting is making changes to an existing building to protect it from flooding or other hazards, such as high winds and earthquakes.

Temporary and Emergency Measures

- Moving furniture and equipment to upper floors
- Sandbagging to hold back rising waters
- Building temporary levees.

Permanent Measures & Examples of Retrofitting



- Elevating the structure
- Wet Floodproofing
- Dry Floodproofing
- Relocation

The Federal Emergency Management Agency (FEMA) has published **The Design Manual for Retrofitting Flood-prone Residential Structures**. This publication presents a series of permanent retrofitting measures that can be incorporated into an existing house to reduce or eliminate the potential of future flooding. **The Design Manual for Retrofitting Flood-prone Residential Structures** can be ordered free of charge by writing:

FEMA Distribution Center

8241-A Sandy Court

P. O. Box 2012

Jessup, MD 20794

ATTN: Publications

1-800-480-2520

<http://www.fema.gov/nfip/forms.shtm>

SURVIVAL SUPPLIES KIT

BE PREPARED

What to include in your kit:

- First aid kit
- Food supply to last at least 3 days
- Bottled water
- Extra family medications, prescriptions, etc.
- Batteries
- Important documents (i.e. Insurance Policies)
- Driver's license and/or other identification
- Property inventory list
- Special medical information
- Maps to your destination
- Extra clothing & blankets
- Weather radio

TIP: Fill bathtubs, sinks and jugs with clean water in case regular supplies are contaminated (sanitize these items by first rinsing with bleach).

FLOOD WARNING SYSTEMS

Residents should listen to local radio and TV broadcasts and updated internet sites to be alert to local advisories.

Radio: WANG (AM 1330) WLGP (FM 100.3)
WOTJ (FM 90.7) WMGV (FM 103.3)
WBJD (FM 91.5) WTKF (FM 107.1)
WRHT (FM 96.3)

Local TV Stations:

WITN (Channel 7) WFXI (Channel 8)
WNCT (Channel 9) Local (Channel 10)
WCTI (Channel 12)

Internet Sites:

www.carteretcountygov.org/EmergencyServices/hurricane.aspx
<http://www.noaa.gov/>

Other Tools: NOAA weather radio

In an unlikely event of a storm developing at night, with no opportunity for prior warning to the public, the local fire and rescue and law enforcement have the capability to deliver flood warning messages.

The Office of Emergency Management (OEM) maintains direct contact with the National Weather Service and National Hurricane Center and relays updates of threatening weather to government, media, hospitals, etc.. The OEM can override the local cable broadcast system to provide storm and flood information. **For more information on Carteret County Flood Warnings, please call the Office of Emergency Management at (252) 728-8470.**

FLOOD INSURANCE RATE MAP (FIRM)

Are you curious about what flood zone you are in ...

Local governments will provide you with information about whether or not a property is located in special flood hazard areas within their respective jurisdictions. In addition, elevation certificates may be on file for any new construction and substantial improvements made since the early 1990's.

In addition, FIRM's can be found at the Carteret County Library, online at: www.ncfloodmaps.com, or contact your local permit office.

FLOOD INSURANCE

Take advantage of flood insurance...

Flood damage is not covered by most standard homeowners' policies. Separate insurance policies are needed for protection against flood damage, which people frequently don't realize until it is too late. You can protect your home, business, and belongings from a flood by purchasing flood insurance.

Flood insurance guarantees compensation for flood damages because the federal government backs the National Flood Insurance Program (NFIP). It compensates all covered losses, even when Federal Disaster Aid is not available. Flood insurance covers structural and mechanical damage that resulted from flooding, as well as flood debris cleanup and floor surfaces (like tile and carpeting). You can purchase additional coverage to insure most of your personal property and belongings.

Plan ahead and get your flood insurance today. There is a 30-day waiting period before your coverage goes into effect.

The National Flood Insurance Program is available in your community! Contact your insurance company today for more information or visit: www.floodsmart.gov



THE MOST SERIOUS THREAT OF FLOODING IS DURING THE HURRICANE SEASON, JUNE THROUGH NOVEMBER.

FLOODPLAIN DEVELOPMENT PERMITS

All properties located in the "Special Flood Hazard Area" on the community's Flood Hazard Boundary Map or Flood Insurance Rate Map are subject to regulations.

Q. What is subject to these regulations?

A. Any man-made change to improved or unimproved property, such as:

- BUILDINGS
- EXCAVATION
- DREDGING
- FILLING
- GRADING
- PAVING

The community may levy a fine and/or obtain a court order to have the owner correct the construction, if built without a permit or if not built according to the approved plans. **For information on floodplain development or to report illegal floodplain development, contact your local permit office (See back of brochure for contact information).**

SUBSTANTIAL IMPROVEMENT REQUIREMENTS

A "substantial improvement" is any reconstruction, rehabilitation, addition, or other improvement to a building, the cost of which exceeds 50% of the market value of the building before the start of construction of the improvement. However, when the building is damaged and the cost of restoring the building to its before-damage condition exceeds 50% of the market value prior to the damage occurring, it is termed, "substantial damage".

New construction or substantial improvement of any structure (residential, commercial, industrial, or non-residential) located in a special flood hazard area shall have the lowest floor, including basement, elevated to or above the base flood elevation.

Contact your local permit office for rules and requirements regarding "substantial improvement" and "substantial damage".

DRAINAGE SYSTEM MAINTENANCE

Drainage systems are the responsibility of the homeowners' association, NC DOT, or the individual property owner.

It is important to keep drainage systems properly maintained. Streams, channels, and detention/retention basins lose their carrying capacities as a result of dumping, sedimentation, and growth of vegetation. When a drainage system loses a portion of its carrying or storage capacity, flooding occurs and waters reach higher elevations.

Dumping in streams is illegal and should be reported to your local permit office or to NCDENR at (910)796-7215.

For more information on Flood and Hurricane Preparedness, please visit your local permit office or a Carteret County Library.

Contact information for local permit offices:

- Atlantic Beach 252-726-4456
- Beaufort 252-728-2141
- Carteret County 252-728-8545
- Cape Carteret 252-393-8483
- Cedar Point 252-393-3204
- Emerald Isle 252-354-3338
- Morehead City 252-726-6848 ext.125
- Newport 252-223-3733
- Pine Knoll Shores 252-247-4353

Contact your local permit office for retrofitting advice and information, as well as assistance or to request a site visit if you experience flood or drainage problems.

IMPORTANT WEBSITES:

Carteret County Information, including GIS maps & County Ordinances www.carteretcountygov.org/

Carteret County Emergency Services
www.carteretcountygov.org/emergencyservices.aspx

Carteret County's Hurricane Information
www.carteretcountygov.org/EmergencyServices/hurricane.aspx

Federal Emergency Management Agency www.fema.gov

Government website great for pet-owners, people with special needs or disabilities, and children. www.ready.gov

North Carolina Department of Environmental and Natural Resources (DENR). www.ncdenr.gov

North Carolina Flood Mapping Program
www.ncfloodmaps.com

National Flood Insurance Program www.floodsmart.gov

National Weather Service www.nws.noaa.gov

Your property is in or near a
"Special Flood Hazard Area"

ARE YOU PREPARED?

FLOOD
TIPS



for
CARTERET
COUNTY
RESIDENTS

Published by the
Carteret County
Department of
Planning and Development
252-728-8545
or
252-728-8497

www.carteretcountygov.org