

Cabarrus County Floodplain Information



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What is a "100-year flood"?

Eighty percent of all disasters declared in the United States are caused by floods. The term "100-year flood" is very misleading. People tend to believe that it happens only once every 100 years. The truth is that an uncommonly big flood can happen any year, even multiple times in a single year. The term "100-year flood" is really a statistical designation saying there is a 1-in-100 chance that a large damaging flood will happen during any year. A better term would be the "1-in-100 chance flood."

To relate it better to home and business owners, many mortgages have a repayment period of 30 years. Buildings in areas that are in or are very close to a 100-year flood plain have a 26 percent chance of experiencing a flood during the life of the loan. However, during that same period, there is only a 4 percent chance of a fire.

(U.S. GEOLOGICAL SURVEY)

Does Cabarrus County flood?



August 27 2008 Old Airport Road

Riverine and flash flooding are types of flooding that occurs in Cabarrus County. Riverine flooding occurs along rivers, creeks, lakes and ponds. Water tends to rise in low lying flood riparian zones next to waterways. Rocky River, Coddle Creek, Fuda Creek, and Dutch Buffalo Creek are several waterways in Cabarrus County that commonly experience riverine flooding. Flash flooding can happen quickly after a significant rainfall event. If there is too much water for creeks and rivers to carry downstream and away from roads and properties, flood waters will rise and spill over roads, bridges and onto properties. Swift moving water associated with flash floods can be very dangerous and damaging.

In late August, 2008, Western North Carolina experienced a very large rain event. Cabarrus County was particularly hit hard. Governor Mike Easley visited Cabarrus County to personally assess the damage. Six roads in Cabarrus County were closed. In Cabarrus County alone, more than 200 residents had to be evacuated, with 51 coming from Kannapolis Village Long Term Care facility. In addition, 70 structures were damaged across the county, some extensively. The Swift Water Rescue Team in Cabarrus rescued 18 people from cars and homes. In several areas, flood waters reached an estimated 6 feet. Several homes received significant damage due to floodwater, with homes in Harrisburg receiving the most damage. Closed roads included Highway 73 near Dutch Rd, Red Bird Circle, Morehead Rd from Highway 29 to Highway 49, Miami Church Rd, Stough Rd. near Marlboro Dr., Bowman Barrier Rd., Zion Church Rd. at Flowes Store Rd., Pharr Mill Rd. at Sequoia Hills Dr., and a portion of Highway 200. Based on collections from the Concord Regional Airport, Cabarrus County received 11.4 inches of rain. The total damage was estimated over \$6.5 million. The photo above was taken on Old Airport Road.

(Joanie Morris)

How do I protect my property from flood damage?

The most obvious way to avoid flood damage is to avoid construction in the floodplain. However, if there is no other option but to build within the floodplain, you should contact the Commerce Department at 704-920-2159 and speak with the Zoning Division to discuss your plans and options.

Flood proofing and retrofitting are construction methods used to protect new construction as well as existing structures. Some permanent floodproofing and retrofitting techniques include, but are not limited to:

- reinforcing and elevating the structure on piers, piles or posts
- relocating the structure to a less flood prone area
- cutting crawlspace vents to accommodate the flow of floodwater
- adding sealants to exterior walls
- constructing floodwalls

There are numerous publications available in public libraries that discuss flood proofing and retrofitting. Publications are also available online at the Federal Emergency Management Agency website at <http://www.fema.gov/library/index.jsp>.

Is there anything else that can be done to prepare for a flood event?

Flooding can be very dangerous because it can occur very quickly. Sometimes drainage areas are overburdened with too much water produced from thunderstorms, hurricanes or tropical storms or blocked by debris. When this happens, flooding can occur.

Only if there is time to prepare and you are not exposing yourself to danger, you can do the following to protect your property:

- place sandbags in areas where water may enter the structure
- place valuables and furniture on the second floor, or in higher areas of the structure
- place outdoor plants, lawn furniture and small objects on higher ground where they cannot be impacted by floodwaters
- move outdoor pets and animals outside of flood prone areas.

Keep trees and landscape plants pruned and free of dead limbs. Wind and heavy rain is more likely to cause overgrown trees to drop large limbs than properly trimmed trees. This will help reduce damage to your home and property in periods of severe weather.

In case you have to evacuate your home, follow these instructions:

- Gather all persons in the household in one place.
- Shut off natural gas supply.
- Turn off lights and unplug all unnecessary appliances.
- Close curtains and shades, and close and lock all windows and doors.
- Check with your neighbors to see if they need assistance – offer to share transportation.
- Notify others when you are leaving, and inform them of your anticipated destination.
- Do not drive on roads that are flooded.

Be sure to take the following items:

- Wallet/purse
- House and car keys
- Money
- Eyeglasses
- Medications
- Warm clothing

It is recommended that you take your pets with you. If you do not, you may not be able to find them when you return.

Make sure that you bring your pet's food, medicine, litter box, crate, water and feed bowls, etc. Also bring a leash and a way to tie your pet outside, if necessary.

The local American Red Cross (704-782-9022) has a list of local motels that allow pets.

For additional information on how to protect your pets during a disaster, please visit <http://fema.gov/kids/pets.htm>

Is there a disaster plan or family preparedness plan available?

The Cabarrus County Emergency Management website provides links to helpful sites if you are trying to prepare a family disaster plan. You can access this information by going to the following link: <http://www.cabarruscounty.us/EMgmt/emergencypreparedness.html>

Does My Home Owner's or Commercial Structure Insurance Policy Cover Damage Caused by Flooding?

The answer is NO. Typical homeowner's and commercial structure insurance policies do not cover flood damages. A separate Standard Flood Insurance Policy is required to cover damages caused by surface water during a flood event.

Buildings located within a 100-year flood plain are required to have flood insurance if they are financed with federally a backed mortgage or home equity loan. Flood policies can be issued for most structures and their contents, including site built, modular and manufactured single family homes, condominiums and commercial structures.

Cabarrus County participates in the National Flood Insurance Program's (NFIP) Community Rating System (CRS) program. Because of this, citizens are eligible to purchase Standard Flood Insurance at a reduced rate. The average premium for a Standard Flood Insurance Policy in North Carolina varies. The national average cost of a \$100,000 flood policy is \$370 annually or less than one dollar per day. A 30 day waiting period is mandatory for new flood insurance policies. Your local insurance agent can provide information on specific rates and coverage.

It is important to know that you do not have to be located within the 100 year flood zone to qualify for a flood policy. Flood zones are always changing due to natural events and upstream development. It is recommended that if there is a potential for flooding in your area, you should take advantage of a Standard Flood Insurance Policy.

(http://www.ncfloodmaps.com/pubdocs/floodinsurance_factsheet.pdf)

Why are there floodplains and what's the benefit for having them?

One of the most important natural functions of the floodplain is to store runoff during and immediately after large rain events. Sometimes there is too much storm water runoff for creek and stream channels to effectively handle. Too much water flow can breach the banks. The floodplain allows the water flow to slow down and spread out. Eventually the water will dissipate back into the streams and rivers.

Slowing the water down and storing it in the floodplain helps decrease erosion and reduces flooding effects downstream. A large undisturbed area provides natural plant and animal habitat. Storm water is also filtered in these areas which improves quality of our drinking water.

Community parks and common open space in subdivisions often occupy areas of the floodplain. Floodplain land can be used for recreation during non-flood periods with minimal disturbance.

Is there a Flood Warning System or Emergency Notification provided by Cabarrus County?

The National Weather Service (NWS) broadcasts Flood Warning Notices and Flood Warnings through local television, radio and wire services. A battery powered NOAA weather radio would notify you of an emergency situation if your home loses power during a storm. Battery backup weather radios are fairly inexpensive and can be purchased at your local hardware or general merchandise store.

In addition to television or radio notification, Cabarrus County Emergency Management has developed *Connect-CTY*[™]. This service allows important messages pertaining to hazards, disasters, and weather

events to be created and sent to every telephone number stored in the notification database. You are encouraged to sign up for this service at the following link: [Connect-CTY™](#)

Can I build in the Floodplain?

Cabarrus County allows limited development in certain areas of the floodplain. A floodplain development permit is required for all development within the 100 year floodplain. This includes construction or repair of buildings or additions, land disturbing activities, construction of bridges or stream crossings, or stream restoration. You can secure a floodplain development permit at the Cabarrus County Zoning Department, located at 65 Church Street, SE, Concord NC.

If substantial damage occurs to existing structures, substantial improvement would be required. Substantial damage is damage of any origin to a structure where the cost of restoration to it's before damage condition would equal or exceed 50 percent of the market value before the damage occurred.

Substantial improvement is any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement.

Additions or improvements less than 50% of the market still require compliance with the minimum flood prevention requirements.

Prior to any work being done, you should contact the Cabarrus County Commerce Department Zoning Division at 704-920-2159, to discuss your project.

Development within the 100-year floodplain requires an elevation certificate to be completed.

You can download a copy of an elevation certificate at the following link:

<http://www.fema.gov/pdf/nfip/elvcert.pdf>

Construction or land disturbing activity in the 100-year flood zone is illegal without the proper local, state and, sometimes, federal permits. You can report any suspected illegal activity to the zoning office at 704-920-2159.

You can review the Cabarrus County Flood Damage Prevention Ordinance by visiting the following site:

[Cabarrus County Flood Damage Prevention Ordinance](#)

Once the page opens, press F5 to refresh the page

Are there real time gages for Cabarrus County rivers and lakes?

You can monitor real time water levels of various rivers and lakes throughout Cabarrus County by accessing the US Geological Survey website.

Real Time for All Cabarrus County Stations

Clarke Creek

http://waterdata.usgs.gov/nc/nwis/uv/?site_no=02124080&PARAMeter_cd=00065,00060

Mallard Creek

http://waterdata.usgs.gov/nc/nwis/uv/?site_no=0212414900&PARAMeter_cd=00065,00060

Rocky River

http://waterdata.usgs.gov/nc/nwis/nwisman/?site_no=0212433550

Helpful Resources

Flood Smart

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

FEMA Library

<http://www.fema.gov/library/index.jsp>.

Connect-CTY™

<https://portal.blackboardconnectcty.com/welcome.aspx?eiid=1207B6088C3775A6687C>

Cabarrus County Flood Damage Prevention Ordinance

<http://library.municode.com/index.aspx?clientId=12658&stateId=33&stateName=North%20Carolina>

North Carolina Flood Maps

<http://fris.ncem.org/fris/>

Cabarrus County Emergency Management

<http://www.cabarruscounty.us/EMgmt/>

FEMA Elevation Certificate

<http://www.fema.gov/pdf/nfip/elvcert.pdf>

US Geological Survey

<http://waterdata.usgs.gov>

Federal Emergency Management Agency

www.fema.gov

Flood Terminology

Floodplain: A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess floodwater.

100-Year Flood: The 100-year flooding event is the flood having a 1 percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years.

100-Year Floodplain: The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood.

Floodway: The floodway is one of two main sections that make up the floodplain. Floodways are defined for regulatory purposes. Floodways are defined as the channel of a river or stream, and the overbank areas adjacent to the channel. The floodway carries the bulk of the floodwater downstream and is usually the area where water velocities and forces are the greatest.

Flood Fringe: The flood fringe refers to the outer portions of the floodplain, beginning at the edge of the floodway and continuing outward. This is the area where development is most likely to occur, and where precautions to protect life and property need to be taken.

Development: For floodplain ordinance purposes, development is broadly defined as any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations." The definition of development

for floodplain purposes is generally broader and includes more activities than the definition of development used in other sections of local land use ordinances.

Base Flood Elevation (BFE): The term "Base Flood Elevation" refers to the elevation (measured in feet above sea level) that the 1% annual flood (100-year flood) is expected to reach.