

# Floodplain Flash

## Aug. 2011 floods: one person's story

Clevetta Ward loved her house and her neighborhood on Charlotte's west side. She and her family had lived on Seldon Drive for six years.

"When I bought the house, I didn't know it would flood," Ward said. Neighbors told her nearby Stewart Creek had flooded one time about 20 years before. "They were confident it wouldn't flood again." But floodplain maps show Ward's house was in a regulated floodplain, the highest-risk area.

In 2007, the creek spilled over its banks and destroyed Ward's furnace. "I thought it was a fluke," she said. The family bought a new furnace and moved the duct work. Two years later, the area flooded again. Ward started getting wary of thunderstorms. "Every time it rained, I prayed 'Please Lord, don't let the creek flood again.'"

**"I thought the past few floods were a fluke."**

Ward didn't have a mortgage so she wasn't required to buy flood insurance. She had looked into buying a flood insurance policy, but said she focused on other priorities such as a loved one's illness. "I guess I dropped the ball," Ward said.

Late in the morning on August 5, 2011, Ward was running some errands when dark clouds started dumping heavy rain on west-central Charlotte. She called her two kids, ages 19 and 20, who were at home. They told her water was coming into the garage.

Ward headed for home and by the time she drove into her neighborhood, Stewart Creek was way over its banks. "There was water everywhere. I had never seen so much water on our street." She saw cars that had been overturned by the fast-moving water. It was still raining and the water was still rising.

The floodwater peaked at nearly three feet deep inside Ward's house and six feet deep inside her garage. Ward said, "I never thought



Floodwater filled Ward's house and garage

that much water would ever come in our house." With the help of a professional restoration company, she salvaged some furniture and tax documents. "But it was so much work. It was so time consuming. It was so frustrating."

Ward has now moved out of the regulated floodplain. She and her family are settling in to their new home. She thinks about former neighbors on Seldon Drive, some who had lived there 40 years or more and lost nearly everything in last summer's flood.

"It was devastating. We were fortunate to only lose material things. But it was still devastating."

Years of rainfall data show flooding in Charlotte-Mecklenburg is not a fluke. If it rains hard enough or long enough, low-lying areas and land along major creeks are always at risk of flooding. Simply put, living in Charlotte-Mecklenburg means living with a risk of flash flooding.

### August 5 flood damage

Nearly seven inches of rain fell in four hours. The heaviest rain was just west and northwest of uptown Charlotte.

- More than 160 buildings flooded
- 86 emergency responses to rescue people from flooded buildings and cars
- Stewart Creek was five feet over its banks near Johnson C. Smith University
- Flood damage totaled about \$2 million

## You own property in a regulated floodplain

Flooding is a natural occurrence during or after heavy rain. This annual newsletter is to help you understand the risks and responsibilities of living in a mapped, regulated floodplain. See a list of local floodplain properties at <http://stormwater.charmeck.org>.

## Did you know?

- 90% of natural disasters in the United States involve flooding.
- Your property's flood history is not the best indicator of current or future risk.
- There are more than 4,000 buildings in Charlotte-Mecklenburg floodplains. Official floodplain maps in Charlotte-Mecklenburg are being updated.
- Smaller streams are not shown on FEMA-approved floodplain maps but those streams can still flood.
- Regular homeowners insurance doesn't cover flood damage.
- Rules for construction, building repairs, renovation, paving and grading are more restrictive in the mapped floodplain.

## in this issue

Updating floodplain maps	p.2
Floodplain construction	p.2
Reducing your flood risk	p.3
Flood insurance	p.3
Who to call	p.4

## Flood facts

Protect your family. Save money. Reduce frustration. Get the facts about flooding.

**Flooding is natural and often cannot be prevented.**

Flooding is caused by heavy rain which is a natural occurrence. If it rains hard, that extra water has to go somewhere.

**One inch of rain in an hour can cause flooding.**

This is especially true on streets and in low-lying areas. Our storm drainage system is designed to effectively handle most downpours. But if it rains too much or for too long, storm drains and creeks are likely to overflow.

**Floodplains are meant to flood.**

The floodplain is the land along creeks and streams. Nature designed floodplains to hold excess water. There is no economically feasible way to keep floodwater out of the floodplain. Land, roads and buildings in the floodplain will always be at a higher risk of flooding.

**Flood history is not the best indicator of flood risk.**

Past performance is no guarantee of future flood risk. Thunderstorms are hit and miss. Intense rain can cause flooding in one part of town but little or no flooding just a few miles away.

**Flooding is the nation's #1 natural disaster. It's also the most common local natural disaster.**

Since 1993, Charlotte-Mecklenburg has had:

- more than 70 flood events
- more than \$30 million in flood losses
- 6 flood deaths.

# Updating local floodplain maps

We're halfway through the process of drawing and approving new floodplain maps

Charlotte-Mecklenburg is updating its floodplain maps. Flood maps need to be revised because flood risks change over time. The remapping and approval takes several years, so the process is being done in stages.

## FEMA review underway

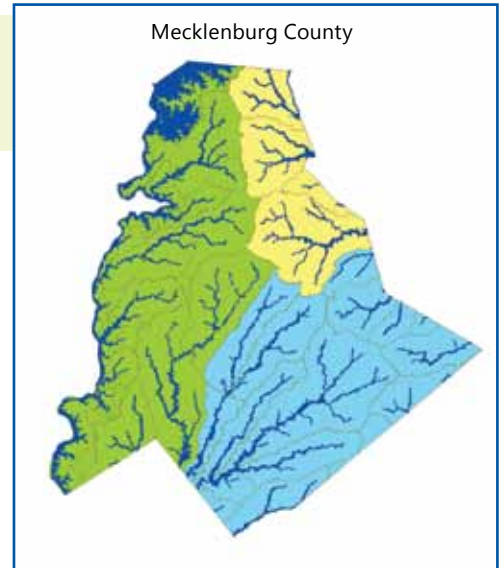
Starting in 2010, flood risks were recalculated along creeks in central and southeastern Mecklenburg County. Floodplain maps for those areas were redrawn. Draft maps have been completed for areas shown on the map in blue.

This year, the Federal Emergency Management Agency (FEMA) begins a year-long review of the draft maps. Floodplain maps for the blue section are expected to take effect for insurance purposes in 2013. Storm Water Services will notify affected property owners when the new maps take effect.

## Remapping continues

### Western watersheds

New data is being used to create draft maps of regulated floodplains for the area shown



in green. Public meetings will follow. The maps for westside watersheds are expected to take effect for flood insurance purposes in 2014.

### Northeastern watersheds

Starting in 2014, new data will be used to create draft floodplain maps for the area shown in yellow. Public meetings will follow. FEMA approval of the maps for flood insurance purposes is expected in 2015.

Get details and mapping updates at: <http://stormwater.charmeck.org>.

## Check your risk on the interactive map

See where your property is within the regulated floodplain. Go to: <http://stormwater.charmeck.org>.



Click:

Drainage and Flooding, then Am I in a Flood Zone? then 3D Interactive Floodzone Map.

Type in your address in the Search box. Check the "FIRM Current" box to see the FEMA and Community flood lines.

Development restrictions apply in both the FEMA and Community Floodplains. Most mortgage lenders require flood insurance in the FEMA Floodplain.

In areas with newly updated Floodplain Maps (shown in blue above), the 3D Interactive Floodzone Map provides even more information including your property's:

- annual flood risk
- expected depth of floodwater
- insurance requirements and more.

A Mecklenburg County **Floodplain Development Permit** is required for any:

- new building construction
- building renovation costing more than \$10,000
- land-altering activity such as grading, filling or paving

in the FEMA or Community Floodplain in Charlotte-Mecklenburg.

There are limits on how much you can spend to renovate an existing home or business if it is in the regulated floodplain and does not comply with current floodplain regulations. This "substantial improvement" rule also applies to repairing flood damage.

**Before you grade or build on land in a regulated floodplain, call Storm Water Services at 704-432-RAIN.**



# Common questions

## You say I'm in a regulated floodplain. What does that mean?

Your property is near a major creek. Storm Water Services uses standard mathematical and engineering calculations to predict which land near major creeks is most likely to flood. Additional regulations apply to the regulated floodplain because it has a statistically higher risk of flooding.

## How can I be in a floodplain if I've never flooded before?

Flood risk is not based on whether you've flooded in the past. Flood risk is based on where water is expected to flow during heavy rain. That calculation includes how far the floodwater will spread, how deep the floodwater will be, and how the floodwater will affect your particular building.

When rain starts falling or creeks start rising, emergency personnel know where the most dangerous flooding is likely to occur. Rain and stream gauges throughout Charlotte-Mecklenburg send automatic alerts to local fire and police. The gauges are part of the **Flood Information & Notification System** or **FINS**. Emergency responders go to rising streams or low-lying areas to decide whether to barricade roads or evacuate residents.



## How can I get out of the floodplain?

Floodplain maps don't create the risk. Instead, they show the flood risk that already exists. You cannot get out of the floodplain unless a FEMA-approved map revision indicates your land or building is outside of the mapped floodplain.

## What difference does it make if I'm in a regulated floodplain?

Your family and property are at a greater risk of being in a flood. Mortgage lenders require flood insurance for buildings in the mapped, regulated floodplain. Local building codes are different in the regulated floodplain. Restrictions on floodplain development apply to new construction, grading, renovations and repairs.



## Do you have flood insurance?

Flood damage is not covered by regular homeowners or business insurance. You need a separate flood insurance policy.

- Everyone is eligible to buy flood insurance, even for property outside of the regulated floodplain.
- Your mortgage lender may require that you have flood insurance, but that policy usually covers only the building.
- You can get a separate flood insurance policy for your belongings such as furniture, clothing and appliances.
- Renters should buy flood insurance for their contents.
- After a typical flood, it costs more to replace damaged belongings than to repair damaged buildings.
- There's a 30-day waiting period before flood insurance takes effect.
- About 100 private insurance companies sell flood insurance.
- Because of local efforts to reduce flood risks, property owners in Charlotte and Pineville floodplains get discounts of up to 25% on their flood insurance premiums.

To find a local flood insurance agent or to estimate your premiums, call the National Flood Insurance Program at 1-888-379-9531 or go to [www.floodsmart.gov](http://www.floodsmart.gov).

**Floods happen naturally.  
Be prepared!**

## Reducing your risk

Flooding is caused by heavy rain. Because rainfall cannot be controlled, floods cannot be prevented. But you can reduce your risk.

### Understand your flood risk

Risk varies inside the regulated floodplain. Know your property's risk. Remember that it also floods outside the mapped, regulated floodplain.

Everyone needs to be aware of the flood risks at their home, their place of business and the roads they drive on.

### Protect your property

Raise air conditioners, furnaces, other appliances and electrical panels above flood level.

Create a flood file with information about your flood insurance policy and possessions. Store it in a safe, waterproof place.

Clear trash and debris from storm drain grates. Don't dump debris or grass clippings in streams, drainage ditches or street gutters.

### Build responsibly

A special Floodplain Development Permit is required each time you grade the land, build a new structure, or repair or renovate an

existing structure in a regulated floodplain.

### Be ready to take action

Pay attention to flood watches and warnings. Watches and warnings are broadcast by local TV and radio stations.

If lives or property are in danger, call 911. If told to evacuate, do so immediately.

Don't drive through flowing water. Most flood deaths happen in vehicles. Don't walk or play in flowing water.

To protect against minor flooding, use sandbags, plastic sheeting and flood shields.

### Floodwater is dangerous

Avoid direct contact with floodwater because it is often contaminated.

Throw away items that came in contact with floodwater and cannot be disinfected, such as food and medicine. If an item cannot be cleaned, discard it quickly to prevent mold from growing in your home.

To kill mold or mildew, clean with a combination of ½ cup bleach and one gallon of water.

Report downed power lines or suspected natural gas line ruptures.



## '100-year flood' is a misleading term

### Who to call:

Minor flooding or drainage problems, or to volunteer:  
**311** or **704-336-7600**

Floodplain maps, Floodplain Permits, floodplain construction:  
**704-432-RAIN**

Flood insurance:  
**1-888-379-9531** or **704-336-3734**

<http://stormwater.charmeck.org>

Floodplain maps show the land along major creeks that has at least a one percent chance of flooding every year. That's commonly called a "100-year flood." But don't let the name fool you.

### More than once a century

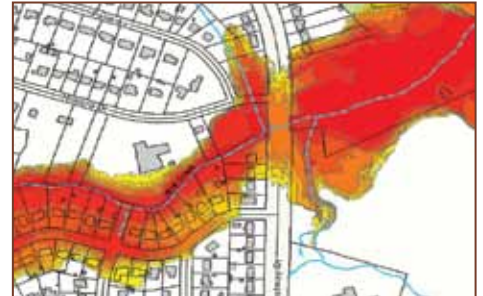
Floods happen irregularly. The same stream can have two "100-year floods" in back to back years.

### More like 50/50

In the regulated floodplain, only the outer edge has a one percent chance of flooding each year. Closest to the stream, the land has at least a 50/50 chance of flooding every year.

On this local flood frequency map:

- Yellow has 1% chance of flooding each year
- Orange has 25% chance of yearly flooding
- Red has 50% chance of yearly flooding.



### Why floodplains matter

**Floodplains are meant to flood** - One acre of undeveloped floodplain can hold 1.5 million gallons of floodwater. By temporarily holding some floodwater, flood risks downstream can be reduced.

**Floodplains can reduce water pollution** - More than 70 percent of the pollution in our streams is carried there by storm water runoff. Plants that naturally grow in marshy areas filter out pollutants.

**Floodplains are important to the environment** - Floodplains provide food, shelter and nesting areas for many types of birds, mammals, insects and reptiles important to the food chain. Storm Water Services restores streams and surrounding floodplains to improve habitat and water quality.



700 North Tryon Street, Charlotte, NC 28202

Printed on recycled paper,  
30% post-consumer waste.



Charlotte-Mecklenburg Storm Water Services has managed storm water runoff and eliminated sources of water pollution since 1993.