

Presentation to the Coastal Advisory Council (CAC)

The relationship of Flood Maps,
The CRS Program, Flood Insurance
and floodplain policies

Brought to you by:

Michael Blakely, CFM

Floodplain Administrator/CRS Program Coordinator

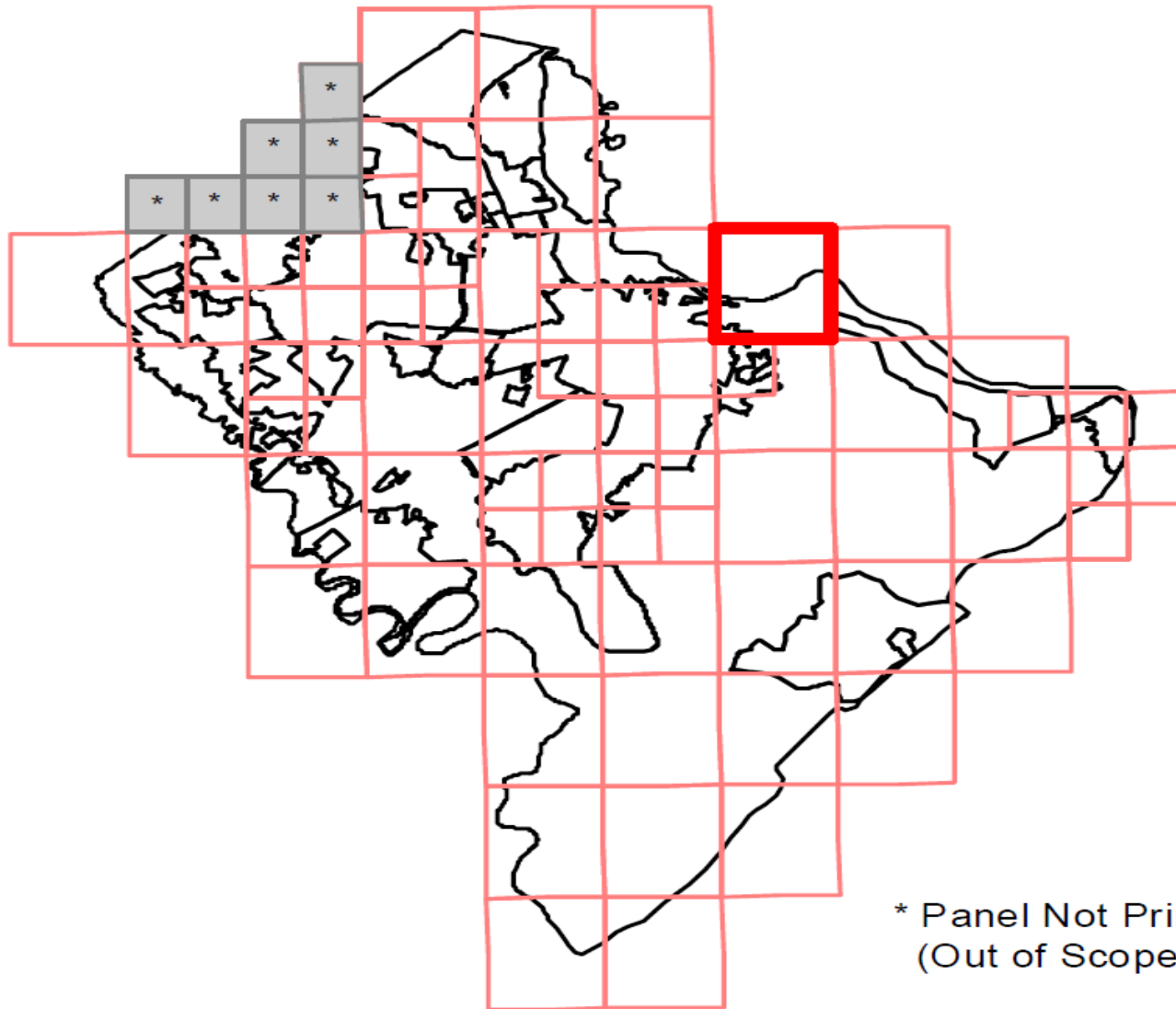


Today's Objectives:

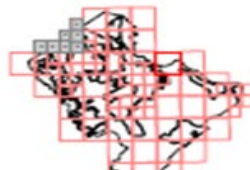
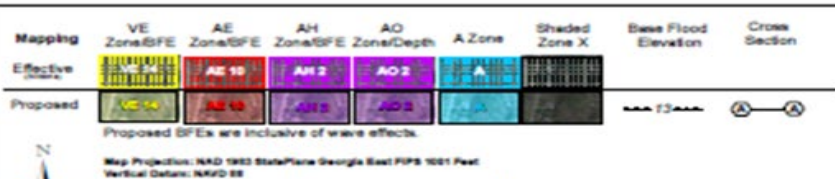
To explain how FEMA's Flood Insurance Rate Maps (FIRM) relates to the Community Rating System (CRS) in association with Flood Insurance policies and floodplain policies relative to Chatham County's Flood Damage Prevention Ordinance (FDPO).

The previously mentioned topics are separate programs that when tied together and properly syncretized can result in a community's ability to protect life and health, minimize damage to public facilities and utilities, help maintain a stable tax base, minimize prolonged business interruptions due to flood damages, and help to insure that potential homebuyers are notified that a property is in a flood area. Results in a more flood resilient community.

FIRM INDEX PANEL



* Panel Not Printed
(Out of Scope)



Chatham County, Georgia
Coastal & Riverine Flood Study

WORKMAPS

PANEL NUMBER: 1305100180J

DRAFT





CHATHAM COUNTY FLOOD ZONE DETERMINATION

CHATHAM COUNTY Department of ENGINEERING, P.O. BOX 8161, SAVANNAH, GA 31412-8161
phone: (912) 652-7800, fax: (912) 652-7818

Date: 11/28/2018
To: Christina Gibson
Mailing Address: 513 E Oglethorpe Avenue, Savannah, Ga, 31401
FAX: (912) 234-5393
Property Identification Number (PIN): 1-0266 -08-008
Property Address: 14 Pinewood Ave
Savannah, GA 31406
Lot Number: 31
Subdivision: Parkersburg

There are local drainage issues within 1-mile of this property.

Flood Depth = N/A

Flood Zone #1: AE **Base Flood Elevation:** 10

Flood Zone #2: X-500 **Base Flood Elevation:** N/A

Flood Zone #3: N/A **Base Flood Elevation:** N/A

Datum: NAVD88

FIRM Panel Number: 0285 of 455, #130030, Suffix J **Source:** STUDY2

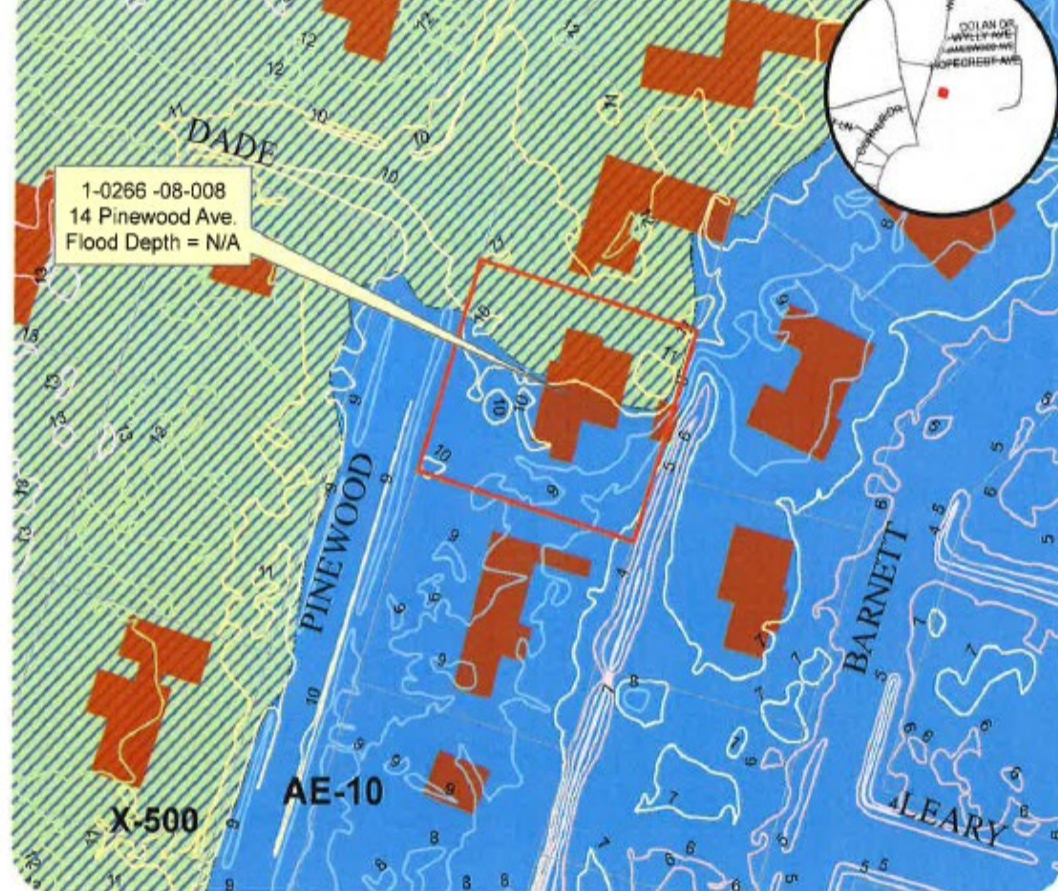
FIRM Date: August 16, 2018

Special Notes:

See Attached Map for Zone Boundaries

This Property is not Located in a CoBRA, LIMWA, or Floodway.

Determination Made By: Michael Blakely, CFM



Flood Zone Boundary Map For Parcel 1-0266 -08-008

This information is based on the Flood Insurance Rate Map for Unincorporated Chatham County.
This information is not to be used for any other purpose.



CHATHAM COUNTY FLOOD ZONE DETERMINATION

CHATHAM COUNTY Department of ENGINEERING, P.O. BOX 8161, SAVANNAH, GA 31412-8161
phone: (912) 652-7800, fax: (912) 652-7818

Date: 8/20/2020
To: Van Tyson

Mailing Address: , , ,
FAX:

Property Identification Number (PIN): 1-0340 -01-034

Property Address: 14 Riverwatch Ln
Savannah, GA 31411

Lot Number: 5030

Subdivision: Moon River Landing

Flood Depth = 3 ft

Flood Zone #1: AE Base Flood Elevation: 9

Flood Zone #2: X-500 Base Flood Elevation: N/A

Flood Zone #3: N/A Base Flood Elevation: N/A

Datum: NAVD88

FIRM Panel Number: 0290 of 455, #130030, Suffix G Source: STUDY2

FIRM Date: August 16, 2018

Special Notes:

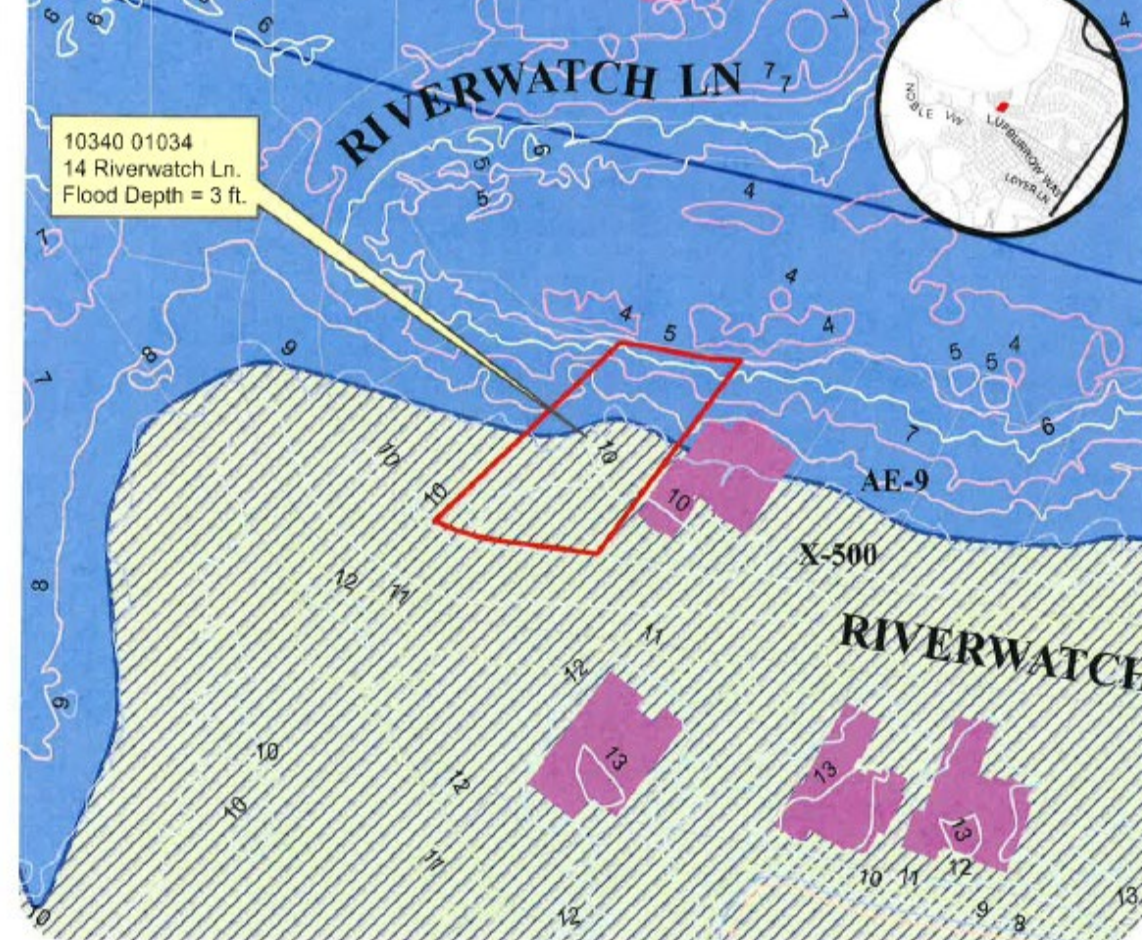
See Attached Map for Zone Boundaries

This Property is not Located in a CoBRA, LIMWA, or Floodway.

Determination Made By: Michael Blakely, CFM

C. Williams, CFM

This information is based on the Flood Insurance Rate Map for Unincorporated Chatham County.
This letter does not imply that the referenced property will or will not be free from flooding or damage.
A property not in a Special Flood Hazard Area may be damaged by a flood greater than that predicted



| Legend | |
|--------|---|
| | Limit Of Moderate Wave Action |
| | Coastal Barrier Resource Area |
| | Building |
| | X500 - Inside the 500-year Flood Zone |
| | FLOODWAY |
| | Parcel |
| | A - Inside the 100-year Flood Zone, with no BFE established |
| | AE - Inside the 100-year Flood Zone, with Flood Elevation (BFE) established |
| | VE - Inside the 100-year Flood Zone, with Velocity Hazard and BFE established |
| | X - Outside the 500-year Flood Zone |

Flood Zone Boundary Map For Parcel 10340 01034

Flood Insurance Rates

A number of factors are considered in determining flood insurance premiums. They include the amount of coverage purchased; the location, age, occupancy, and design of the building; and, for buildings in SFHAs, the elevation of the building in relation to the **Base Flood Elevation** (BFE). Buildings that are situated at or above the level of the BFE are at less risk than buildings below BFE and therefore have insurance rates commensurate with that risk. The farther below BFE a building lies, the higher its flood risk and flood insurance rate will be.

A second element in the determination of insurance rates is the date a building was constructed. The NFIP makes a distinction between what it labels **pre-FIRM** and **post-FIRM** construction. In general, pre-FIRM insurance rates are lower because theoretically at the time of construction the community and property owner had no way of knowing what the flood risk would be at that site and thus how to protect the building by elevating it or other means. In contrast, the post-FIRM policy rates are based on actuarial determinations of the flood risk.

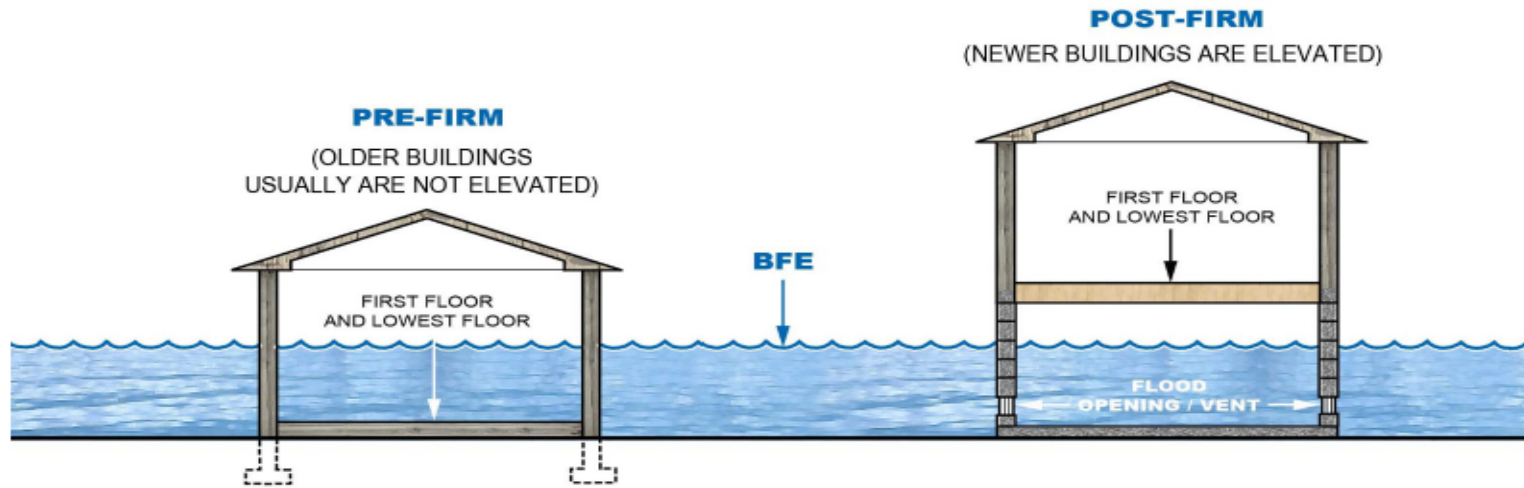


Figure 3. Pre-FIRM versus Post-FIRM construction

The **base flood**—that flood that has a 1 percent chance of being equaled or exceeded in any year. This is also commonly referred to as the 100-year flood. BFEs are established and depicted on the FIRM for the flood-prone area.

Actual Application of digital map change in Chatham County.

After FIRM Map Change

Before FIRM Map Change



About the Mandatory Purchase of Flood Insurance Requirement

NFIP: This community participates in the National Flood Insurance Program (NFIP), which makes federally backed flood insurance available for all eligible buildings, whether they are in a floodplain or not. Flood insurance covers direct losses caused by surface flooding, including a river flowing over its banks, a lake or ocean storm, and local drainage problems.

The NFIP insures buildings, including mobile homes, with two types of coverage: building and contents. Building coverage is for the walls, floors, insulation, furnace, and other items permanently attached to the structure. Contents coverage may be purchased separately, if the contents are in an insurable building.

Mandatory Purchase Requirement: The Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994 made the purchase of flood insurance mandatory for federally backed mortgages on buildings located in Special Flood Hazard Areas (SFHAs). It also affects all forms of Federal or Federally related financial assistance for buildings located in SFHAs. The SFHA is the base (100-year) floodplain mapped on a Flood Insurance Rate Map (FIRM). It is shown as one or more zones that begin with the letter "A" or "V."

The rule applies to secured mortgage loans from such financial institutions as commercial lenders, savings and loan associations, savings banks, and credit unions that are regulated, supervised, or insured by Federal agencies such as the Federal Deposit Insurance Corporation and the Office of Thrift Supervision. It also applies to all mortgage loans purchased by Fannie Mae or Freddie Mac in the secondary mortgage market.

Federal financial assistance programs affected by the laws include loans and grants from agencies such as the Department of Veterans Affairs, Farmers Home Administration, Federal Housing Administration, Small Business Administration, and the Department of Homeland Security's Federal Emergency Management Agency (FEMA).

How it Works: Lenders are required to complete a Standard Flood Hazard Determination (SFHD) form whenever they make, increase, extend or renew a mortgage, home equity, home improvement, commercial, or farm credit loan to determine if the building or manufactured (mobile) home is in an SFHA. It is the Federal agency's or the lender's responsibility to check the current Flood Insurance Rate Map (FIRM) to determine if the building is in an SFHA. Copies of the FIRM are available for review in most local government building or planning departments. Lenders may also have copies or they use a flood zone determination company to provide the SFHD form.,

If the building is in a SFHA, the Federal agency or lender is required by law to require the recipient to purchase a flood insurance policy on the building. Federal regulations require building coverage equal to the amount of the loan (excluding appraised value of the land) or the maximum amount of insurance available from the NFIP, whichever is less. The maximum amount available for a single-family residence is \$250,000. Government sponsored enterprises, such as Freddie Mac and Fannie Mae, have stricter requirements.

The mandatory purchase requirement does not affect loans or financial assistance for items that are not covered by a flood insurance policy, such as vehicles, business expenses, landscaping, and vacant lots. It does not affect loans for buildings that are not in an SFHA, even though a portion of the lot may be. While not mandated by law, a lender may require a flood insurance policy, as a condition of a loan, for a property in any zone on a FIRM.

If a person feels that a SFHD form incorrectly places the property in the SFHA, he or she may request a Letter of

This is an Introduction to the Department of Homeland Security, Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), Community Rating System (CRS)

- The NFIP was created in 1968 Stafford Act as a way to offset taxpayer funded disaster relief,
- More affordable flood insurance now available,
- Mandatory if using a federally insured loan,
- Premiums help pay for disaster relief,
- Flood Insurance only available in communities which have adopted a FEMA-approved floodplain management ordinance

History of the Community Rating System (CRS) in Chatham County

- ❖ Joined the National Flood Insurance Program (NFIP) on August 1, 1980.
- ❖ Federal Emergency Management Agency (FEMA) adopted the CRS program in 1990.
- ❖ County joined the CRS program in 1991.
- ❖ County adopted the first Flood Damage Prevention Ordinance (FDPO) in **1987** and was last revised and adopted in 2018.

Flood Insurance policies – As mentioned previously, flood insurance rates can be reduced significantly by a community's participation in the CRS Program. Also, the flood insurance rate quote of a particular home can be impacted significantly by the way the structure is built. For example, if a community has an aggressive freeboard requirement, say 3-feet, for every foot above FEMA's BFE, flood insurance rates decrease. You will see about 40% savings for the initial foot above the BFE. And about 10 to 15 % for additional footage. As shown on the next illustration, the higher a home's finished floor is built above the base flood elevation (BFE), the greater the flood insurance savings.

CRAWLSPACE BUILDING

NOTE:

- Total net area of all total openings is 1 square inch per square foot of enclosed area
- A 30' x 40' building needs 1,200 square inches of openings
- If inserted in flood openings, typical air ventilation units must be disabled in the open position to allow water to flow in and out
- A typical air ventilation unit, with screen provides 42 to 65 square inches of opening (look for "net free area" stamp on unit)

ALTERNATIVE: Engineered openings are acceptable **if certified** to allow adequate automatic inflow and outflow of floodwaters.

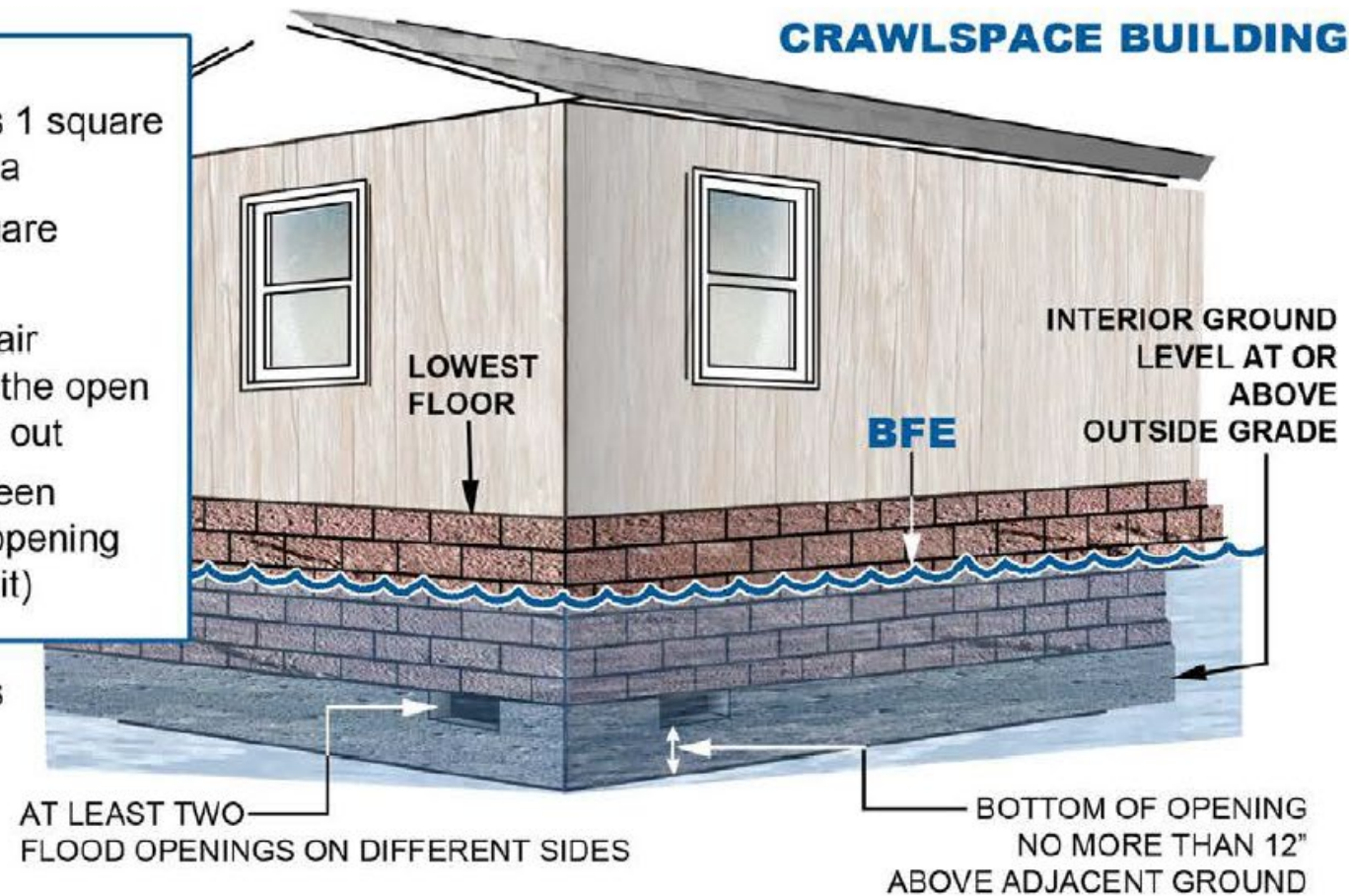


Figure 34. Flood Openings

Solid perimeter wall foundations can enclose flood-prone space. A crawlspace is a good way to elevate just a couple of feet. In all cases, the following are required: flood vents/openings, elevated utilities, flood-resistant materials, and limitations on use.

Utility Service Inside Structures

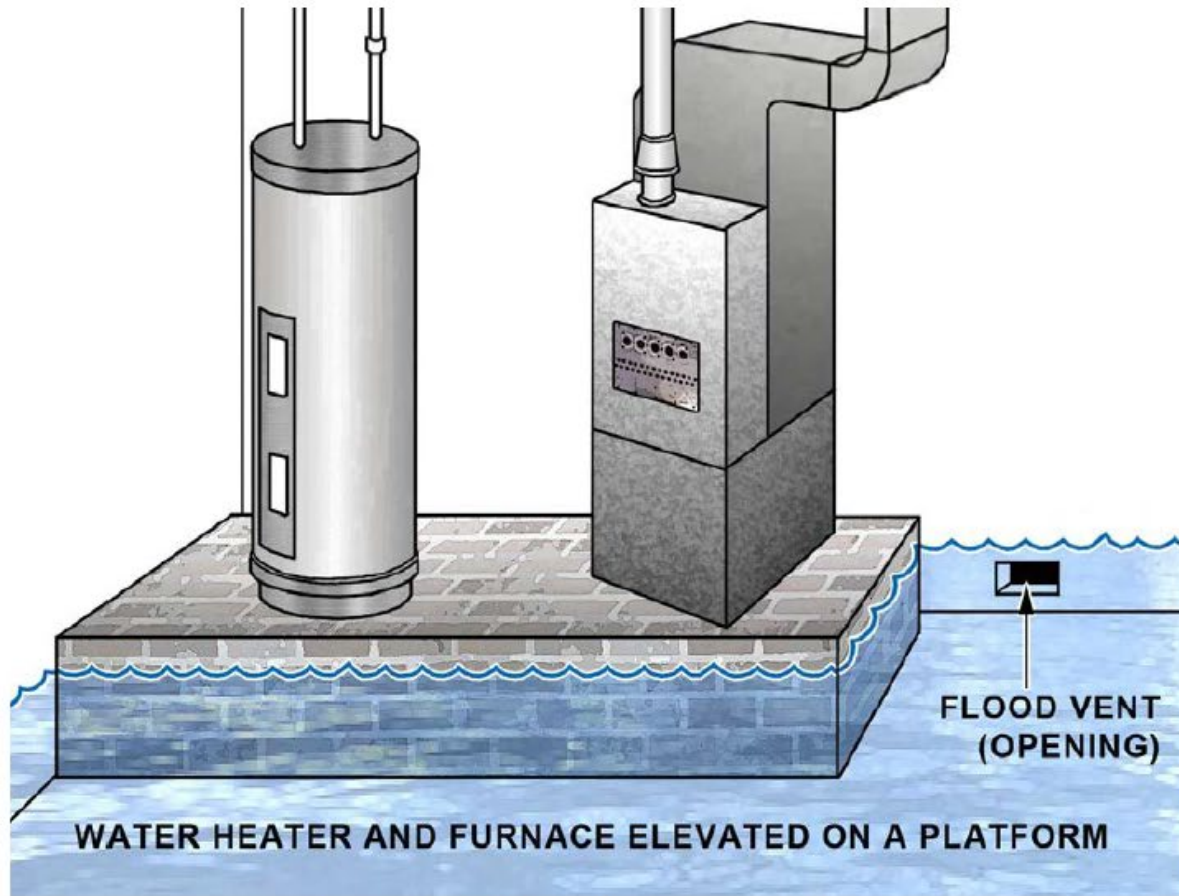
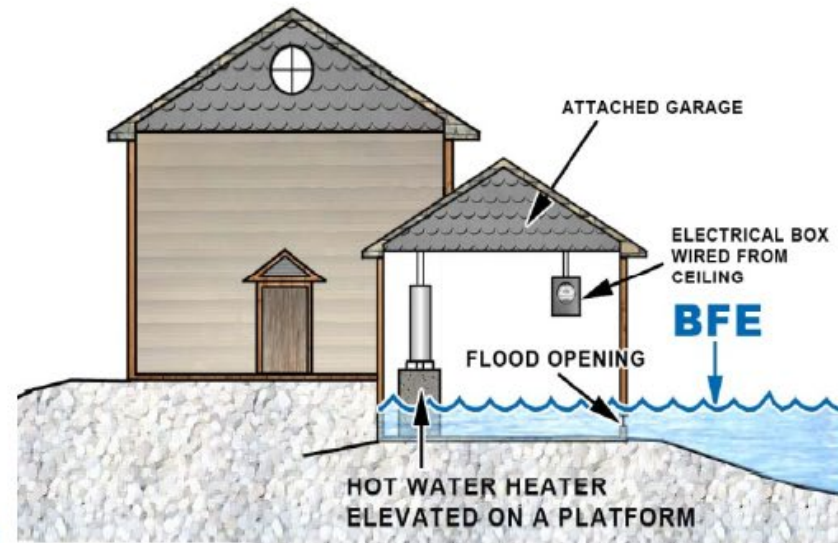
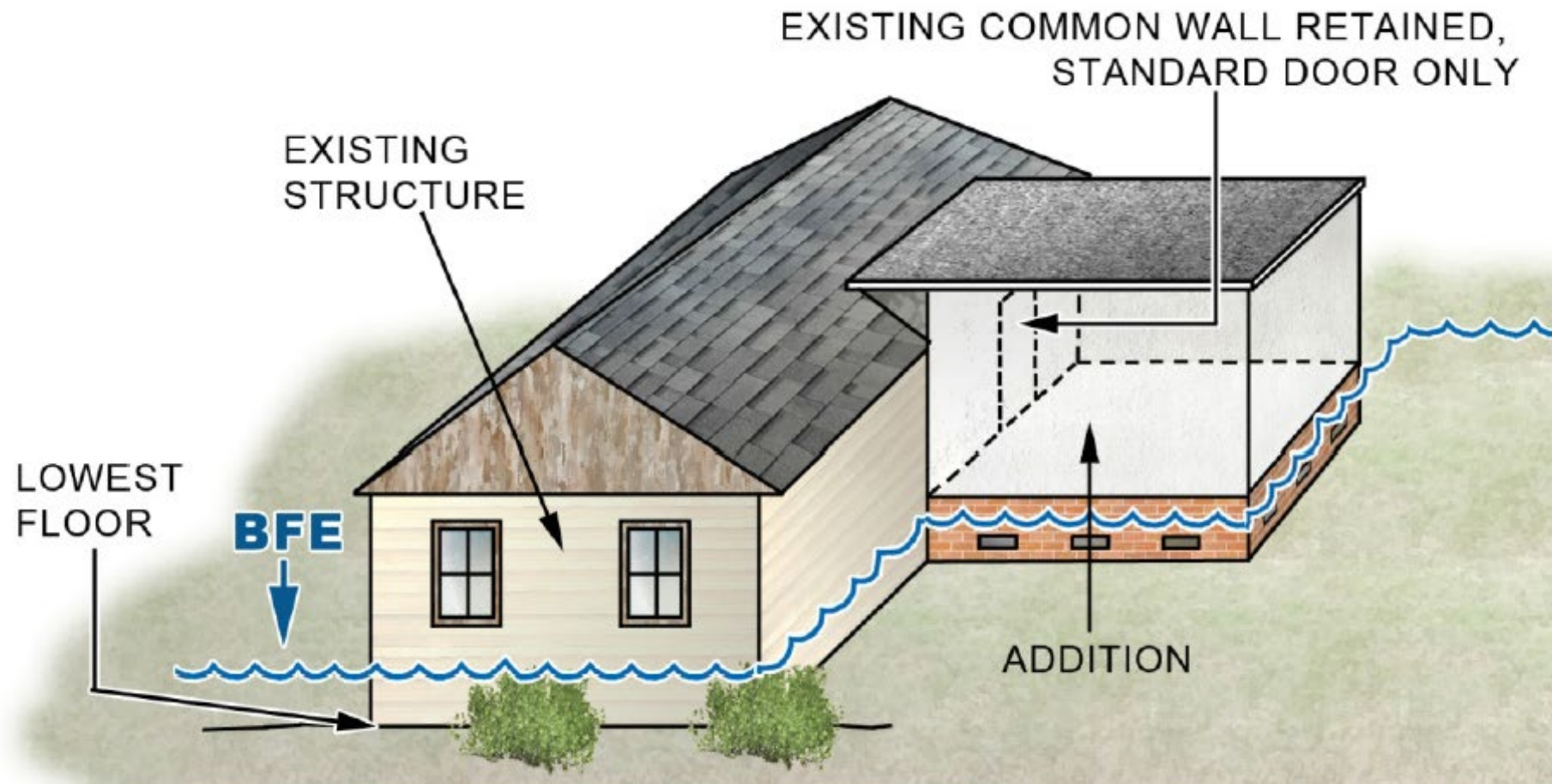


Figure 44. Utilities elevated on a platform



All utilities, appliances, and equipment must be elevated above the BFE or protected. Utilities include plumbing, electrical components, gas lines, and heating and air conditioning equipment.

Substantial Improvement: Lateral Addition Only



The Cost of Flooding

- ▶ Estimate your potential flood damages by visiting floodsmart.gov
- ▶ By clicking on “The Cost of Flooding” link below, you can estimate the cost of flood damages based on the sq. ft. of your home relative to the anticipated flood depth.
- ▶ You can determine the anticipated floodwater depth within your home by contacting your local floodplain administrator. She or he can make a determination based on the base flood elevation (BFE) from the FIRM maps and your street address.

The screenshot shows the FEMA National Flood Insurance Program website. At the top, there are logos for FEMA and the National Flood Insurance Program, along with a search bar and a link to "Visit FloodSmart for Agents". Below the navigation bar, there is a large banner with the text "This is an official site of the National Flood Insurance Program." and a "Get Coverage" button. To the right of the banner is a photo of a couple looking at a laptop. Below the banner, there is a section titled "The Latest from the NFIP" with a sub-header "Prepare for Flooding After Wildfires" and a paragraph of text. Below this, there are four circular icons with corresponding text: "The Cost of Flooding", "What's Covered?", "Flood Maps", and "How to Reduce Your Costs".

Visit FloodSmart for Agents

Search

Buying a Policy ▾ Renewing a Policy ▾ Flood Risks and Costs ▾ Before and After a Flood ▾ Flood Zones and Maps ▾

This is an official site of the National Flood Insurance Program.

The NFIP offers flood insurance to help you protect the life you've built and recover more quickly after a flood.

[Get Coverage](#)

The Latest from the NFIP
Prepare for Flooding After Wildfires

After a wildfire, it's hard to imagine another risk ahead. If you live in and around areas that have experienced a wildfire, you face a higher risk of flash flooding and mudflows. Talk to your insurance agent today about purchasing flood insurance to protect your home from flood after fire risks.

[Learn More](#)

The Cost of Flooding
See just how much flood damage can cost you. Remember: with flood insurance, you're able to recover faster and more fully.

What's Covered?
Flood insurance covers your home and the things inside it. Learn more about coverage limits and what is or isn't covered.

Flood Maps
No matter where you live or work, some risk of flooding exists. Know your flood risk by finding your community's flood map now.

How to Reduce Your Costs
Lowering your flood risk can lower your costs. Learn more about mitigation strategies and related discounts.

CRS Background

- Participation in the CRS program is voluntary.
- Rewards communities for exceeding NFIP minimum requirements by reducing flood insurance premiums.
- The Community must meet application prerequisites.
 - Participation in the NFIP for at least one year.
 - Full compliance with the NFIP regulations.
 - Our Inspection Department must maintain a Building Code Effectiveness Grading Schedule (BCEGS) of **Grade 4 to qualify for CRS Class 4 or better. CRS Class 4** communities receive a 30% discount off flood insurance premiums.
 - We must review and accept only accurate EC's and make them available to the public.
 - Must meet Repetitive Flood Loss property guidelines.

CRS Benefits

- Reduce flood insurance rates
- Improve flood protection
- Enhance public safety
- Evaluated vs. national benchmarks
- Technical assistance
- Qualification of Federal assistance (\$\$\$)
- Incentive to keep implementing flood activities



CRS Point System - Where we Stand

- ❖ Current Rating 5 - Effective May 2014
 - ❖ 3,281 Points
- ❖ Rating of 6 - Effective May 2009
 - ❖ 2,065 Points
- ❖ Rating of 4 - Eligible for Application
 - ❖ Need BSEGC Rating improved.
 - ❖ Sea Level Rise Study, Phase II
- ❖ Rating of 3 - Almost There!
 - ❖ **219 Points Away.**
 - ❖ No new requirements.

| Table 110.1 CRS classes, credit points, and premium discounts | | | |
|--|---------------------|-------------------|--------------|
| CRS Class | Credit Points ((cT) | Premium Reduction | |
| | | In SFHA | Outside SFHA |
| 10 | 0-499 | 0 | 0 |
| 9 | 500-999 | 5% | 5% |
| 8 | 1,000-1,499 | 10% | 5% |
| 7 | 1,500-1,999 | 15% | 5% |
| 6 | 2,000-2,499 | 20% | 10% |
| 5 | 2,500-2,999 | 25% | 10% |
| 4 | 3,000-3,499 | 30% | 10% |
| 3 | 3,500-3,999 | 35% | 10% |
| 2 | 4,000-4,499 | 40% | 10% |
| 1 | 4,500+ | 45% | 10% |
| SFHA: Zones A, AE, A1-A30, V, V1-V30, AO, and AH | | | |
| Outside the SFHA: Zones X, B, C, A99, AR, and D | | | |
| Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are to have a minimal risk of flood damage. | | | |
| Some minus-rated policies may not be eligible for CRS premium discounts. | | | |
| Premium discounts are subject to change. | | | |

CRS Community Rankings

- ▶ 1 Class 1: City of **Roseville**, California
- ▶ 8 Class 2: Sacramento City & County; FT. Collins, City of Ottawa, IL; City of Tulsa, OK; and the counties of King, Pierce, and Thurston County WA.
- ▶ 5 Class 3: Ocala, FL.; City of Ocala, FL; Louisville-Jefferson County KY; Borough of Avalon, NY; Sea Isle City, NJ; **Charleston County, SC**.
- ▶ 6 Class 4: Maricopa County, AZ; Town of Cutler Bay, and Palm Coast, FL; City of Charlotte, NC; City of Ocean City, NJ; City of **Folly Beach, SC**.
- ▶ 158 Class 5: Cities of **Savannah**, **Tybee Island**, Jekyll Island, Griffin, and **Chatham County**, GA; The Town of Hilton Head Island, City of Greenville, Beaufort County, Town of Kiawah Island, City of Myrtle Beach, Town of Sea Brook Island, Town of Sullivan Island, Town of Surfside Beach, SC.

Major Impacts to Building Costs as a Result of the CRS Program

- ▶ No Fill is allowed in the VE Zone (*Code of Federal Register = CFR requirement*) and if mitigation cannot be obtained onsite for a project in the AE Zone there is no fill allowed.
- ▶ Interior partitions in the crawl space are not allowed. (*CFR requirement since 1987*)
- ▶ Wood frame construction is not allowed below the **Design** BFE. (*insurance requirement*)
- ▶ All projects in the VE Zone require certification by a Georgia PE. (*CFR requirement*)

Construction Method Concerns in the AE Flood Zone

- ▶ No fill material or **stem walled backfilled** structure allowed unless onsite mitigation designed.
- ▶ Must use flood resistant materials below the **Design** BFE (no sheetrock, pine studs, insulation or wood doors).
- ▶ No separate rooms or enclosures below the **Design** Base Flood Elevation (**DBFE**).
- ▶ Non-Conversion Agreement required for crawl space **and enclosure areas**.
- ▶ Hydrostatic venting required in **enclosure areas below BFE**.
- ▶ **Stick-built** Wood framed **foundation** construction is not allowed below the **DBFE**.
- ▶ Elevators are allowed but could raise premiums.

Construction Method Concerns in the VE Zone

- ▶ Foundation system can only utilize Piles, Post, Piers or Columns.
- ▶ NO FILL allowed in the VE Zone (except certified landscaping).
- ▶ **V Zone Design Certificate** must be sealed by a Georgia licensed architect or engineer.
- ▶ Air Conditioning and duct work must be above the **DBFE**.
- ▶ Must use flood resistant materials below the **DBFE** (no sheetrock, pine studs, insulation or wood doors).
- ▶ Bottom of the lowest horizontal **structural** member must be at or above the **DBFE**.
- ▶ Break away walls must be used in areas below the **DBFE and must not exceed 299 sq. ft. in area.**
- ▶ **Driveway and slab areas must be non-reinforced concrete. Technical Bulletin (TB 5-93)**

Chatham County's **Flood Damage Prevention Ordinance** (FDPO) – the FDPO is considered the Floodplain Administrators bible. As FEMA updates the FIRM maps the community must update the local flood ordinance to comply with the changes. Additionally, FEMA's CRS Task Force is constantly updating the CRS Coordinator's Manual to coincide with modern trends and technology improvements. I had the honor of serving as a member of the CRS Task Force from 2015 to 2020. My primary role was to present coastal concerns from the local level relative to proposed changes and updates to the CRS Coordinators' Manual. The FDPO establishes rules and guidelines necessary for building structures safely from flood damages within the SFHA. On a daily basis, the Floodplain Administrator consults with homebuilders, developers and parcel owners in an attempt to regulate construction activities, fill placed within the floodplain, and works with homeowners that wish to construct a room addition or modification to their existing home. Depending upon the severity of the proposed construction, the entire home may be required to be improved (finished floor elevated to current standards, etc.) to ensure compliance.

In Conclusion:

- ▶ 1. FEMA's **Flood Insurance Rate Maps** (FIRM) designate how we should build depending on the parcel location. For example, you should never see a concrete slab-on-grade home located within a VE flood zone;
- ▶ 2. The **Community Rating System** (CRS) provides rewards to homeowners for compliant structures as a result of the community's efforts;
- ▶ 3. **Flood Insurance** is a government subsidized program that offers homeowners coverage at reduced rates;
- ▶ 4. Floodplain policies (Chatham County's **Flood Damage Prevention Ordinance** (FDPO)) provides regulating criteria for all structures built in the SFHA. The Ordinance is periodically edited, updated and adopted by local government to comply with the mandates and updates of the FEMA FIRM map changes. We also edit the Ordinance to comply with insurance requirement inconsistencies that adversely impact flood insurance rates. Example: Limiting enclosure areas in VE zones to 299 ft².